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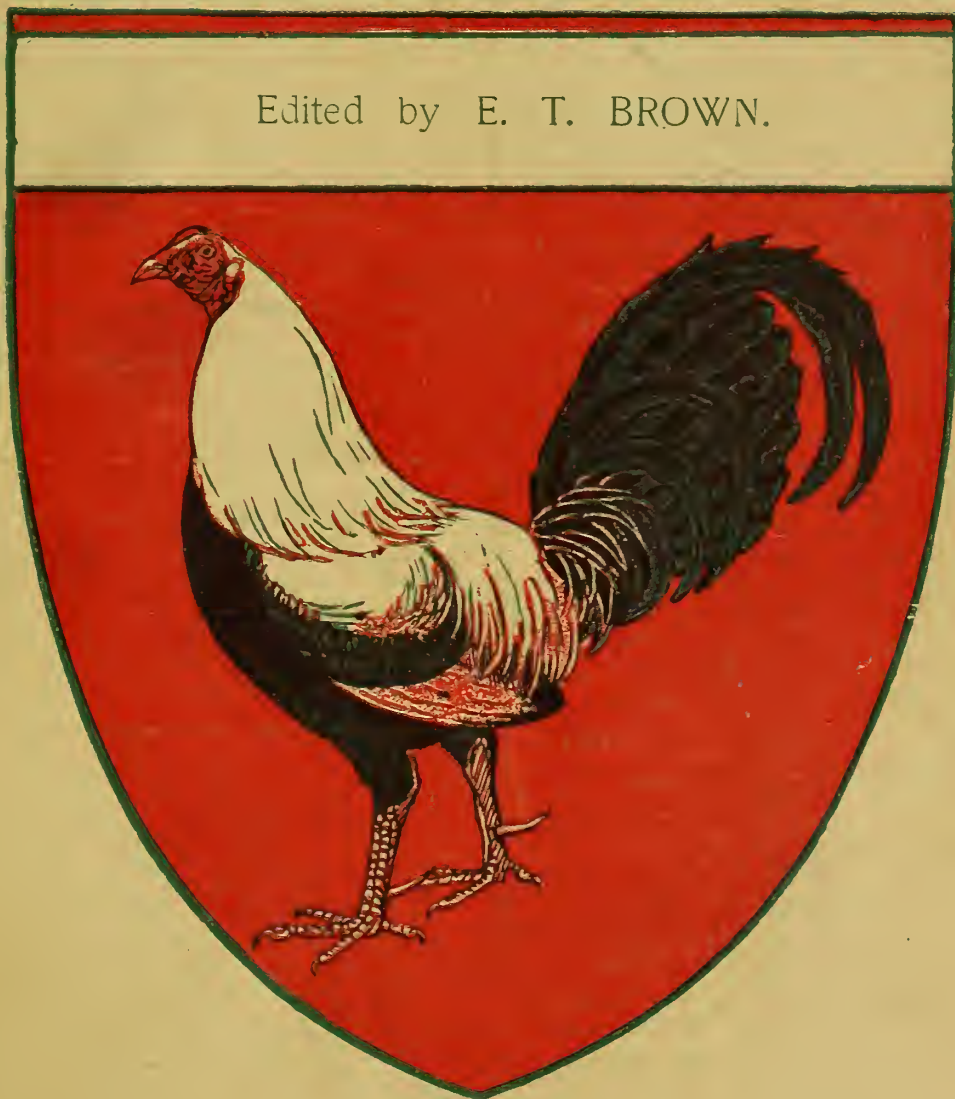
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NUMBER 11.

AUGUST, 1914.

VOLUME VI

Edited by E. T. BROWN.



MONTHLY

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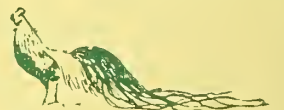
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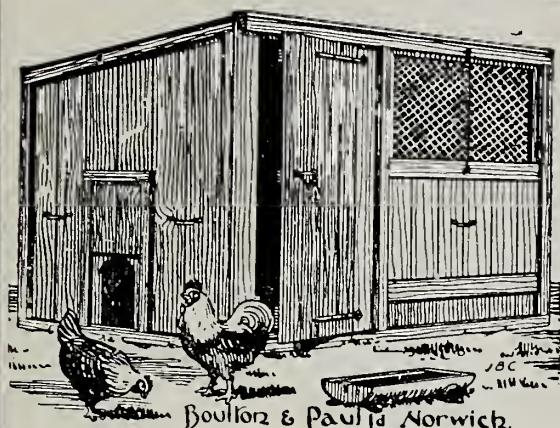
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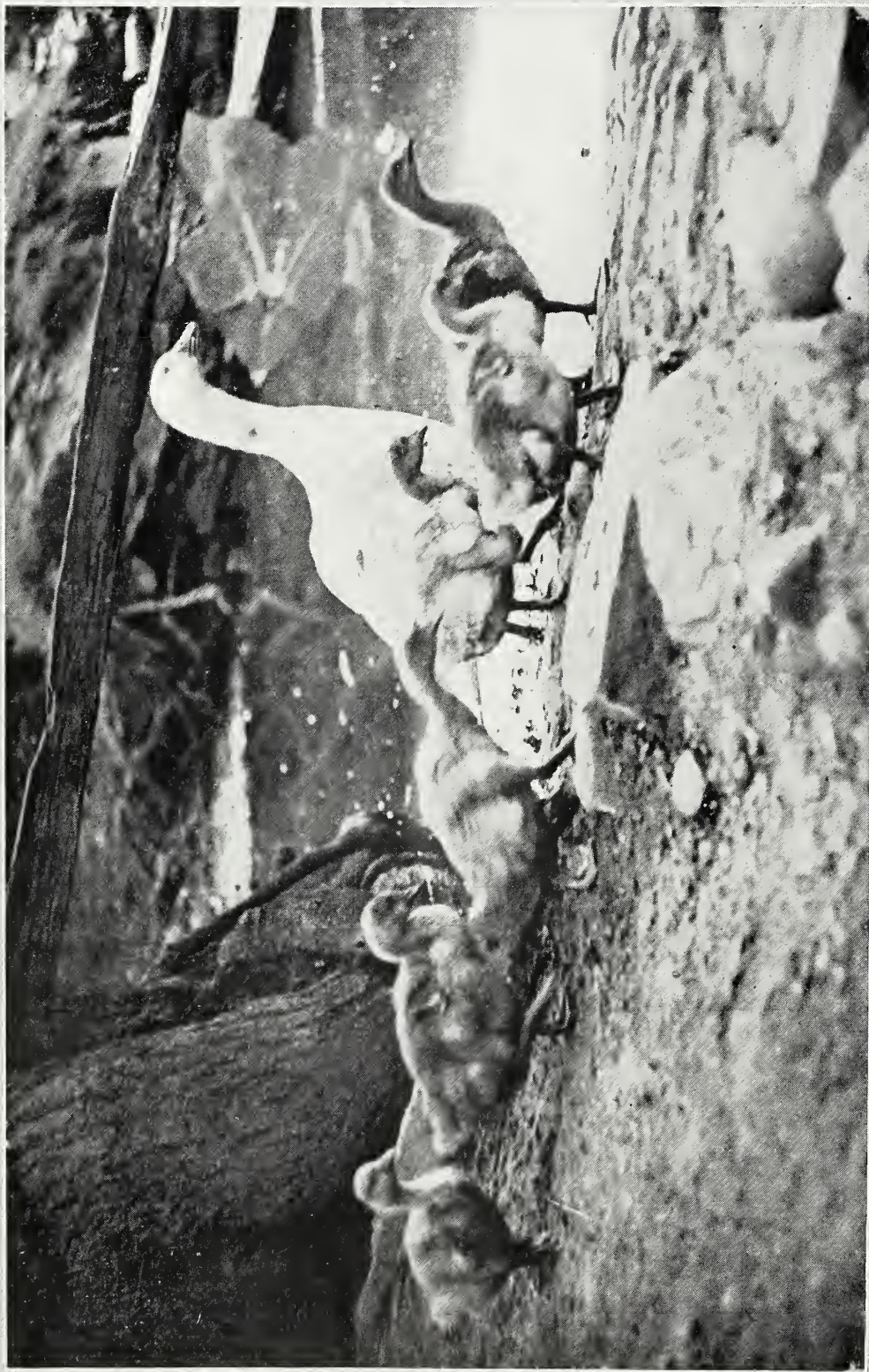
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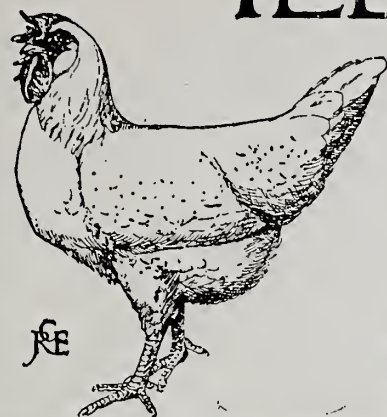
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# THE ILLUSTRATED POULTRY RECORD



Vol. VI.—No. 11.

August 1, 1914.

Monthly, Price Sixpence.

## DIARY OF THE MONTH.

### EDITORIAL NOTICES.

TUDOR HOUSE, TUDOR STREET, WHITEFRIARS,  
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*The Editor would like to hear from readers on any Poultry Topics, and all Queries addressed to the paper will be answered by experts in the several departments. The desire is to help those who are in difficulty regarding the management of their poultry, and accordingly no charge for answering such queries is made.*

*The Annual subscription to the ILLUSTRATED POULTRY RECORD at home and abroad is 8s., including postage. Cheques and P.O.O.'s should be made payable to the ILLUSTRATED POULTRY RECORD.*

**The ILLUSTRATED POULTRY RECORD is published on the first of every month. Should readers experience any difficulty in securing their copies promptly they are requested to communicate immediately with the Editor.**

**The latest date for receiving advertisements is the 20th of the month preceding date of issue.**

**The utmost care is exercised to exclude all advertisements of a doubtful character. If any reader has substantial grounds for complaint against an advertiser, he is requested to communicate at once with the Editor.**

### A "Fox" Bill.

Miss Galbraith is to be congratulated upon the accomplishment of her Poultry-Keepers Protection Society, in securing a First Reading of a Bill, presented by Mr. F. G. Kellaway, Member for Bedford; for the protection of owners of poultry against the heavy loss due to the preservation of foxes for hunting purposes. We reproduce the Bill on another page. The principle of making the various hunts liable for all losses arising in this way is one with which everyone will agree who recognises the justice of the case, and that poultry-keepers have suffered seriously in the past because they were hardly in a position to help themselves. They have practically made a very handsome, although enforced, contribution to the pleasure of a few, when right was on their side. Members of Parliament who are concerned more with sport than development of the national food resources may laugh at the proposal. The time for that is past, and there has arisen a grim determination to secure justice, too long denied. To many it is a question of livelihood, in view of which pleasure is of small moment. The day has gone when the matter can be shelved or ignored.

### What Should Be Done.

Whilst we recognise that in these days the chances of a Private Member's Bill are very few, and that this session it can hardly be expected to go a step further, a beginning has been made. Poultry-Keepers have to convince the Legislature that their cause is a just one and that they are in grim earnest. So far as the first is concerned, there should be little difficulty in that direction. In fact, this much is generally recognised, as



evidenced by the warnings uttered to fox-hunters by the *Westminster Gazette* and the *Globe*, representing the two great political parties, and that the whole case was practically given away by the Committee of the Masters of Foxhounds Association four years ago. To that end, however, it is essential that the Bill shall be fair, simply designed to make hunts pay the full losses which arise, promptly and without the almost insulting demeanour of some of those bodies. With regard to the second, it is desirable that every society, whether of poultrymen or smallholders, in the country shall prepare petitions to Parliament and bring their views before Members, so that the latter may know what are the views of those most concerned. Fox-hunting is strongly entrenched and has powerful ramifications which cannot be ignored, and it would be foolish to fail by want of realisation that such is the case. To this question we shall return between now and next session. Meanwhile all should be up and doing his and her share.

#### **Poultry on a Smallholding.**

The Journal of the Board of Agriculture for July contains record, by Mr. J. H. Scott, of a year's poultry work (April 1, 1913, to March 31, 1914) on a smallholding, in continuance of account published previously. A little more than half an acre of land has thus been used, divided into six pens, on which fowls have been kept, varying from 27 to 75, in accordance with the season of the year, and in addition 158 were reared either to laying or killing age. The average egg-production was 118, which was very good; of the chickens hatched (by hens entirely) 61 were lost from various causes, which was very high; the cockerels and hens sold were in the rough, not fatted in any way. Of these 83 realised £8 18s., or 2s. 1-73d. each, or 7d. per lb. The capital engaged was £30, and the year's trading showed a profit of £16 16s. 10d., against which must be set £3 depreciation and £1 10s. interest, bringing it down to £12 6s. 10d., or under 5s. per week. Manure would pay for rent. Penning fowls in this way is not the line of success, first by reason of the cost of fences, and, second, that manure produced cannot be utilised to the fullest extent.

#### **A Rating Question.**

What is the legal position respecting the rating of wooden poultry-houses of a portable nature is one upon which a decision will have to be arrived at sooner or later, as a guide to local authorities. That permanent buildings may be liable appears probable, although few are rated in rural districts. They are generally lumped together with the other structures. It is more in urban areas that this matter is likely to arise, as there the assessors are usually on the outlook for all they can secure. We all prefer to escape these necessary but none the less annoying exactions. At the same

time poultry-keepers must face facts as they are. The King's Government and the local services must be paid for, and all have to bear their share of the burden. What we want, however, is a definite decision upon what is a complex and uncertain matter. If a stable or a cow-house or a barn come within rateable buildings, then we fear that fixed poultry-houses will ultimately be included. A portable house is totally different. The whole subject of rating requires to be dealt with, and that is business long overdue.

#### **"Rooster Day."**

A novel plan has been adopted in the State of Missouri, and on a wide scale, which is worthy of emulation elsewhere. During the week ending Saturday, June 6, a quarter of a million male birds were marketed by farmers and poultry-keepers in that great poultry State, the object of which was to ensure that the eggs laid afterwards would be sterile when sold for eating. By this means it is expected that a vast amount of loss during the hot season, due to developed germs, will be avoided. Those who have experienced the high temperature of these middle Western States, when 90 to 95 degrees F. is met with night and day for weeks, will realise that a vitalised egg is subject to influences of which we know comparatively little. The date selected was when the breeding season was ended and the "roosters" were no longer required. It speaks volumes for the farmers of Missouri that they should have responded to this organised holocaust. If in all countries a similar plan were adopted it could not fail to be beneficial. In fact, were sterile eggs systematically placed on the market they would soon find general acceptance.

#### **Undersized Hens.**

Whilst it is undoubtedly true that the most prolific hens are smaller in size of body and less in weight than the average of their race, there is a limit even to that, otherwise we should soon come down to Bantams. Evidence has been abundantly seen in connection with the various laying competitions that additional size and weight mean fewer eggs. In this, however, is a considerable danger, as undue reduction probably will show that very early laying has caused arrestment of growth, and in turn that could hardly fail to be followed by weakened constitutions and degeneracy. It is stated that in some of the Australian competitions the White Leghorn pullets entered did not weigh more than 2½ to 2¾ lbs. each, and that with the measure of forcing adopted they did not add much to that during the first year. The Hawkesbury authorities, therefore, have made a condition that no bird shall be accepted weighing less than 3½ lbs. That has considerably upset some of the competitors. It is a wise regulation, however. Excess either above or below is undesirable.



### The Blind and Poultry-keeping.

Among the many efforts which are being put forward for helping those to whom sight is denied, which not too early are receiving widespread support, thanks to the noble work of Mr. C. A. Pearson, who has himself passed into the shadows, is that of poultry-keeping. At a recent conference Captain Peirson-Webber, who, whilst blind, is yet lecturer to Warwickshire and Northamptonshire, showed what is within the powers of a man denied sight. He is indeed a wonder. No one who has had any contact with him cannot but feel the greatest admiration for the courage with which he has overcome his great affliction, and the marvellous powers of not only doing things, but of discriminating between points which are not always easy to those who have full vision. Probably he is exceptionally gifted, yet his accomplishments must give hope to many who are as he is. It is satisfactory to know that the National Institute for the Blind have transcribed the Board of Agriculture poultry leaflets into Braille type, so that they can be read by those who are blind.

### Another Resignation.

Following upon the severance of Mr. Edward Brown's connection with the Agricultural Organisation Society in January last, of which full particulars were given in our March issue, is that of Mr. Alfred Wood, F.C.A., financial secretary, who, after three years' service, placed his resignation in the hands of the governing body, terminating his association at the end of May. Mr. Wood formerly had a private practice in Manchester, which he gave up on appointment to the A.O.S. He has had much to do with Co-operation, and carried through the reconstitution of the Society eighteen months ago, amid many difficulties. As an indication of recognition of Mr. Wood's abilities we are glad to know that since his resignation became effective he has been appointed secretary of three societies formed under the Development Commission to administer grants from the Development Fund—namely, the British Tobacco Growers, the British Flax and Hemp Growers, and the Sugar Beet Growers Societies, whose address is 14, Victoria Street, Westminster, S.W. Mr. Wood, under this arrangement, is permitted to practise as a chartered accountant and public auditor.

### Table Poultry in Scotland.

It is with great satisfaction we announce that the Scottish Board of Agriculture has decided upon the adoption of a fattening centre where demonstrations can be made in respect to this branch of the poultry industry and training given to those who may desire to adopt the system. That is in conformity with the recommendations made by the Departmental Committee on Poultry Breeding in Scotland, whose report was published

in 1909, in which it was recognised that there are sections of Scotland wherein, climatically and by the nature of the soil, the conditions are eminently favourable to growing high-class table chickens. In fact, some of the finest Dorkings have been bred North of the Tweed, and if they can thrive in a district it must be suitable. The districts specially referred to are the North-Eastern and the South-Western counties, whose shores are bathed and temperature is influenced by the beneficent Gulf Stream. Up to the present time little has been done in this direction. When once there is a beginning then there is no apparent reason why great developments should not take place. What is stated above foreshadows that beginning.

### Control in the Egg Trade.

In connection with the recent New Zealand Poultry Conference a proposal was discussed for the establishment of an official test and guarantee for all exported eggs. Information comes to hand that such has been established for the Dutch Co-operative Egg Societies. In Holland, as in Denmark and also Ireland in the butter trade, the importance of a standardised and independent test is recognised, so as to maintain quality and defend the interests of producers and those of consumers. That is not quite so easy with eggs. More than a dozen years ago the National Poultry Organisation Society realised how necessary it was to afford an absolute guarantee, for which purpose its rose-brand trade mark was introduced. The slow progress of co-operative organisation in England especially, owing to the great and growing demand for eggs in nearly every district, together with reluctance of retailers to accept marked eggs which could not be supplied all the year round, have prevented anything like general adoption. With foreign senders it is different. Guaranteed eggs sent in sealed cases could not fail to occupy a position unassailable. We shall watch this system with great interest in the hope that ultimately it may be adopted in every country.

### Agricultural Shows and Utility Poultry.

In *Feathered Life*, Mr. W. M. Elkington, referring to the Royal Agricultural Show at Shrewsbury, has called attention to the fact that to the utilitarian poultry-breeder there was nothing that appealed to him. The exhibits of live birds were fancy stock, judged on fancy lines, adjudicated upon by fanciers. It might have been an ordinary exhibition run by and in the interests of the fancy element. What is the case at the Royal is equally true at many summer agricultural shows, with the result that there is no real community between the practical farmer and the poultry section. The classes include all kinds of fowls even to Bantams, which, however interesting they may be, do not appeal to the farmer, much less the small-holder, to whom prolificacy of egg or flesh production is



the supreme factor. It is farcical that such should be the case. What ought to be aimed for is that the breeds at these great agricultural fixtures and the type of birds to which prizes are awarded, shall be such as can be most useful to those for whom these exhibitions are supposed to cater, and in whose interests they are arranged.

### Sussex Fowls in America.

All the signs are that the near future will see a great increase of Sussex fowls across the Atlantic. Already goodly numbers from some of our best breeding establishments have been shipped, some of which are in the hands of men who understand the art of booming. A Sussex club has been formed, and is arranging classes at many of the leading exhibitions. That this breed has qualities which should commend it to American breeders is unquestionable, even though its white flesh and legs run athwart the old penchant for yellow flesh, which, however, is not so pronounced as formerly. Recognition is being given to the fact that the white-skinned European breeds have meat properties peculiarly their own, and that their softness of flesh and rapidity of growth are factors of great value for the chicken trade, and also lend themselves to the feeding-off process. It may be hoped that this side of productiveness will be maintained,

as there is danger lest, with the stimulus due to change of environment to a totally different climate, the egg qualities may be developed at the expense of the flesh.

### Poultry and the Peninsula.

Following upon its Food Number, to which reference was made in the July issue, the *Times* brought out a Spanish Number, in which, among a great mass of general information, was given an article on "Spanish Influence on European Poultry," which will be found in other pages, and will doubtless be read with interest. That Spain and, in fact, other nations on the Mediterranean have had great influence is well known. Of these she has probably been slowest in her own development, and there are few countries in Europe where production and consumption of eggs and poultry are lower *pro rata* to the population and area. The figures given in the article referred to in both these directions are surprising. As, however, these come from official sources, they may be regarded as approximately correct. Spain has to some extent prepared the way for others to build upon. There is abundant scope and great opportunities for Don Salvador Castello and others if, and that is the rub, they find a response among the people they are seeking to serve.



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THE FATTENING SHED ON MR. BRIGHT HOLMES' FARM AT BUXTED, SUSSEX.

(See following pages.)



## WITH A CAR AND A CAMERA IN SUSSEX.

NO fairer scenes could well be imagined than those which in succession are obtainable in a motor-car tour through the chicken districts, and on the early July day spent there it was a vision of continued beauty, now and again with glimpses of the distant sea, together with the glorious downs and rich, highly cultivated country, the centre of the English table poultry industry.

After passing East Grinstead we enter upon the beautiful elevated Ashdown Forest, well wooded, yet not what its name might indicate, for it has been in the main brought under cultivation. Thence, descending to the south-east, Buxted is reached, two miles from Uckfield, around which some of the finest table chickens are produced, the land here being richer than farther east. We passed by way of Hadlow Down to Heathfield, the capital of the chicken country, around which there is a considerable number of fatters, and which has grown considerably within recent years, thanks to poultry, and is fast assuming the features of a small and thriving town. We call to mind visits paid years ago when it was very different to what is now the case. A run out to Punnett's Town, by way of the historic Cade Street, brought us to Mr. Joseph Oliver's fattening establishment, the largest plant in Sussex. Then, by way of Mayfield and Rotherfield, to Tunbridge Wells, Tonbridge, and Sevenoaks, a bee-line is taken to the metropolis. This journey did no more than give a hurried glimpse of the chicken country, for many of the fattening centres—by the limitations of time—from Hoathley to Warburton and Hellingly could not be visited. It may, however, be regarded as typical of the entire area.

We can commend a similar trip to all those who desire to combine a study of methods adopted in Sussex with views of some of the fairest English landscape. One fact, however, would probably surprise the ordinary visitor who is on the outlook for big poultry plants and evidences of great numbers of fowls. These are not in evidence from the highways, simply because they do not exist. With a few exceptions here and there it might be assumed that industrial conditions do not prevail to any extent. Fowls are to be found; not, however, in large numbers. Often as we pass along signs are apparent of fattening sheds and cages, and now and again of a breeding plant on modest lines; yet not more than, if so much as, may be found in other parts of this and foreign countries. The abundant hedgerows and small woods hide such as are near the roads. The great majority have

to be looked for up by-roads and at the back of farms; and as to the fowls themselves, these are distributed and not massed. The adult fowls live a natural life, wandering among the trees and over the fields. The chickens are grown in a natural manner, and as the term of their natural existence is brief, they fail to give any impression of numbers such as might be expected. Yet they are there all the time, for the output is very large, even though totally inadequate to the demand, for large numbers of birds have to be brought from Ireland and Wales to meet the requirements of fatteners. Yet there are signs which mark the production of the district. Often by the roadside, at ends of lanes or by gates, may be seen a few of the chicken peds containing dead birds packed for market, left there to be picked up by the carriers or collectors. One photograph shows three of these placed under the lea of a prominent sign-post.

Within recent years two changes have become evident in this part of Sussex—first, the increasing number of breeders of pure-bred stock, or poultry farms, as they are called. At one period practically no attempt was made by Sussex men to take advantage of their reputation and skill in the breeding and sale of stock birds. Even though the term Sussex was one to conjure with and the native breed, as distinct from the Dorking, was possessed of high flesh qualities, they seemed indifferent to the one and had almost permitted the other to pass out of existence. This fact was at last realised, thanks to an address given at Lewes by Mr. Edward Brown, F.L.S., who pointed out what was being sacrificed in this way, and the Sussex Poultry Club was the result, to the work of which much of the later developments are due. The Sussex breed is winning favour in many countries, and will do so in the future. Whilst bred elsewhere with great success, its home is mainly on the Southern Downs, and quite a number of breeding establishments have arisen, although these are by no means restricted to the Sussex fowl.

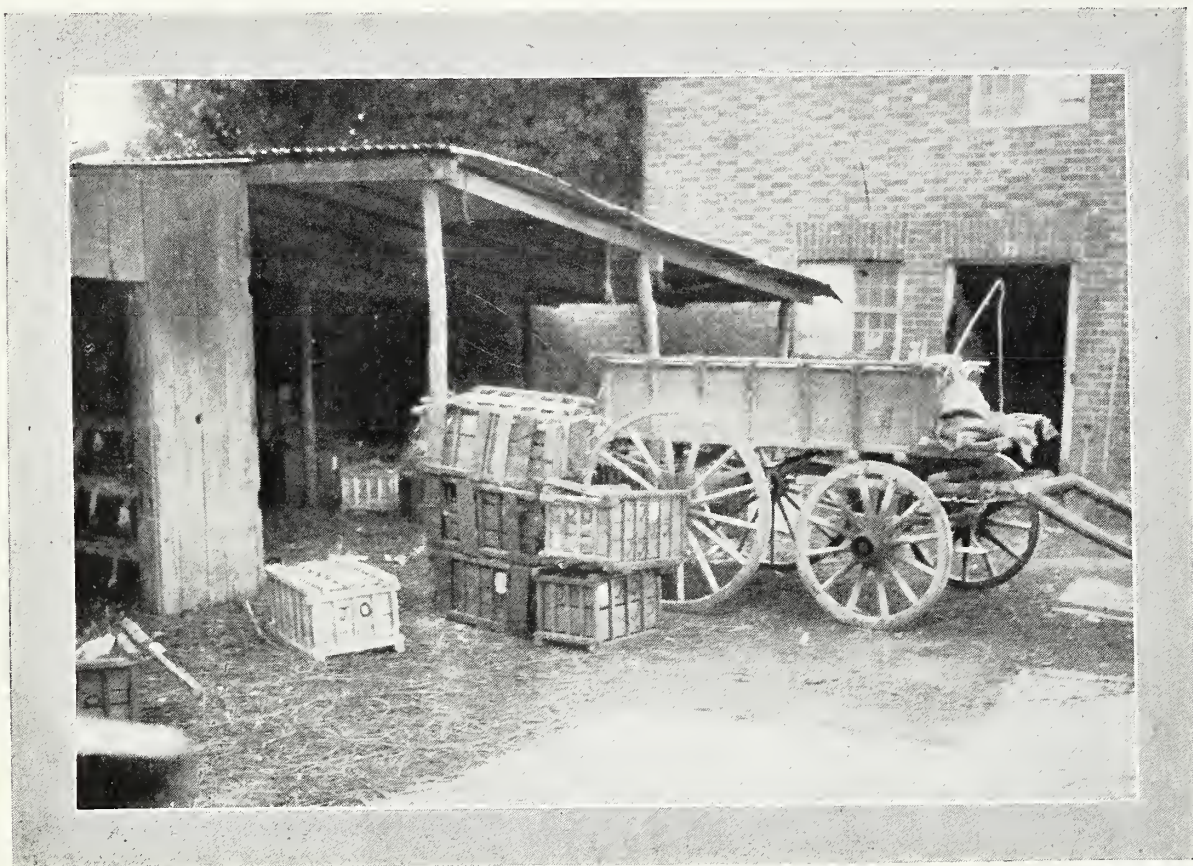
The second change referred to is that there is an increasing tendency, more especially among some of the newer and younger fatters, to rear a part of the chickens required by them, for which are three explanations—namely, that the advance in price insisted upon by growers for lean birds, so markedly manifest of late, has seriously reduced the profits of fatteners, and there is every prospect that this tendency will continue, as it is an undoubted fact that production has not grown to the same extent as demand. At one period Irish chickens could be purchased at rates which left



a fair margin of profit. In Ireland the same tendency has followed equally by reason of adoption of fattening there and increasing demand. Therefore the second explanation is found—that is, the growing difficulty of obtaining sufficient birds of a suitable type and at the right seasons to keep the work going. Third is the undoubted fact that, owing to advancing values, the business of rearing chickens in this district was never before so profitable as is now the case, and with a decreasing margin on the fattening side the duplication redresses the balance. The top prices paid this year were 3s. 6d. each, which, for birds from eleven to thirteen weeks old, must leave a very considerable profit to the raiser.

enhance the work. As already indicated, developments in this field will probably be more by the smaller fatteners, which are, however, in the majority and account for the bulk of the output. That in itself is a satisfactory feature of the chicken industry, in that it is in many hands, the gains of which, therefore, are distributed.

Were it not for the excellent system of collection and dispatch organised by the carriers, Messrs. Bean, of Heathfield, and Bournier and Co., of Uckfield, smaller fatteners would be at a great disadvantage in marketing their supplies. That, however, does equal justice to all. There is a direction in which combined action would be of great service—namely, as birds must be



**CRATES PACKED READY FOR DISPATCH.**

*[Copyright.]*

A photograph on Mr. Joseph Oliver's fattening establishment at Heathfield, Sussex.

Even in July 2s. 3d. had to be paid, and at the time when ultimate values are falling. Doubtless this tendency will increase, more especially in the case of the smaller fatteners who market 50 to 200 chickens per week. At some of the larger establishments, such as that of Mr. Joseph Oliver, at Punnet's Town, it would be more difficult. There the output is often 1,000 to 2,000 chickens in the busy season, the raising of which would be a considerable undertaking. Even a thousand birds weekly means that there must be twelve thousand in various stages of growth, apart from those in the fattening cages. That would be a big undertaking, and would considerably

killed when ready and cannot be profitably kept alive beyond a certain stage, it would be of the greatest advantage if cold-storage plants could be put down near the stations at Heathfield, Uckfield, and one or two other centres, as by that means the supplies to London and elsewhere could be regulated in accordance with demand. In this way probably the period of profitable fattening could be extended considerably and stocks held from the cheaper to the dearer seasons. That should be accomplished by the united action of the fatteners, and the suggestion might be taken up by the Sussex Poultry Association.



As already indicated, the Sussex chicken industry is essentially distributive in its nature, and therefore differs considerably from others, notably, in America and Belgium. That explains why it has been free from the disease which has devastated Flanders, where the methods adopted have been highly intensive. During the fattening stage the conditions are abnormal. That, however, only extends over three weeks at most, and then terminates by death. In the main birds are bred and raised naturally. This is a satisfactory state of affairs. For instance, Mr. F. Curd, of Butcher's Farm, Buxted, whilst he rears a large proportion of the birds fattened, recognises the importance of what is stated, informed us that he has had practically no disease other than the usual infantile troubles. He comes of a fattening family for at least three generations, and is an instance of the newer development in combination of rearing and fattening already referred to. So long as this system is followed, health will be maintained. So soon as intensified methods of breeding take the place, then the risk of change will be considerable. Sussex men, whilst indisposed to change for its own sake, are naturally conservative and have adhered to natural methods, yet incubators are used to a considerable extent. At the same time rearing by hens is preferred whenever and wherever that is possible. The questions thus raised are of considerable importance in the light of what has taken place elsewhere. Except for the final process the Sussex poultry industry is essentially a branch of the general agriculture of the county, linked with the ordinary cultivation, and contributing substantially to the welfare of the people, who find a steady and remunerative outlet for chickens at almost any season. That is true also of cottagers, for these use the small plots at their disposal for chicken raising. In the main it is not an independent source of livelihood but a valuable supplemental pursuit, which for such a branch is probably the way of greatest success.

The photographs which form one of the records of this short trip explain themselves. It is not that Buxted is the most important place, but, striking it first, it was found that the other centres visited but duplicated what was there seen, and that additional views were solely to a greater extent mere repetitions. Conversations with the breeders and fatteners called upon have emphasised previous impressions—namely, that here is a healthy pursuit, conducted on sound lines which make for permanency, contributing to the prosperity of a considerable area, as it has done for generations, and that later developments have been evolutionary. It involves, however, hard, constant, and laborious work to the fatteners, who gain nothing more than is well deserved by their enterprise and skill. The chicken raisers reap a great benefit by the outlet

provided and the prices gained. In one or two instances, however, it was stated that general farming prosperity is tending towards reduction of the number of birds reared annually and that there is a disposition to turn more to what are



[Copyright.]

#### AT THE CROSS ROADS.

Crates of chickens for the London market waiting to be picked up by the carrier who travels the district daily.

thought to be pursuits involving less trouble. That seems to be the only danger which, so far as we can see, threatens the chicken industry of Sussex.

#### Mr. Tamlin's Exports.

The following is a list of Mr. W. Tamlin's exports for June, 1914 (143 machines): Ten 100 incubators, to Hayward, Young, and Co., agents for Port Elizabeth; twelve 100 and six 60 incubators, to A. Newcomb and Co., agents for New Zealand; thirty 60, five 30, ten 100, and four 200 egg incubators, two ostrich incubators, four 60 and two 100 foster-mothers, to Messrs. Chandler, agents for Melbourne, Australia; thirteen 100 and ten 60 incubators, to Mr. C. W. Champion, agent for Bloemfontein, South Africa; one 60 incubator, to M. Sparenberg, van der Heuvel, Brussels; one 60 incubator and one 60 Sunbeam rearer, to Chili, order of Messrs. McColl and Rogers; two 100 egg incubators, to M. Stassens, Ostend; twelve 60 and twelve 100 egg incubators, also six 30 incubators, to J. F. Marshall, agent for Johannesburg, South Africa.



## MYOPIA IN THE POULTRY INDUSTRY.

By EDWARD BROWN, F.L.S.



**S**HORT-SIGHTEDNESS is a mental as well as a physical deficiency. It is the former which proves the more serious, for by lack in that direction evil results are directly brought about which could frequently be avoided. Man creates the greater part of his own misery. Myopia assumes two forms—one of which is due to absolute inability to look beyond the immediate; the other is caused by refusing to see what is well within the range of vision. "Nobody can help being bald if his hair won't grow." Although the latter of the two forms named could often be avoided the effect in either case is identical. Either there is a total failure to realise what is possible and within range of opportunity, so that the operations are unduly circumscribed, or that methods are adopted which lead to disaster by ignoring factors which, although slow in action, bring about degeneracy, weakening the body and its functions, thus sapping the powers of resistance to malign influences. The forces working for degeneracy have recently been discussed and need not be referred to again. My present purpose, therefore, is to deal with some at least of the first-named. The prime necessity for all connected with practical poultry-breeding is to recognise that development is essential to progression. We cannot stand still.

### WHAT CAN AND WHAT CANNOT BE.

There is no finality in method. Further evidence is constantly forthcoming in nearly every line of life showing that what was at one time thought to be impossible has been attained. Discoveries are often made by striving after what seems to be unattainable. At the same time there can be no question that there are limitations, as that any contravention of natural laws can only have one result. How far we are able to discern these laws and their application is another question. Upon our doing so will depend whether the barriers which are ever in the way of pioneers can be overcome or whether there is a fair chance of such accomplishment. Many failures in connection with poultry-breeding are directly due to want of precautions against forces that even a moderate amount of experience should reveal. Perhaps the greatest amount of loss in this way has resulted from ignoring the principles of heredity and sanitation, the first-named of which weakens the physical forces, and the last-named induces conditions that create disease by providing the media in which bacteria and parasites find opportunities for rapid development and multiplication. In both these directions we cannot hope for widening the scope,

as they are in opposition to what must be regarded as immutable laws. The range of operation is sufficiently wide to give great play to man's influence and labour. There are, however, boundaries beyond which he cannot hope to go. The former of these may be embraced within the "can," the latter include the "cannot."

### VALUE OF EXPERIENCE.

Where many novices make an initial mistake is in ignoring what has gone before and what has been attempted by others. It has been said that "You cannot play cricket by yourself." Similarity of action and of operation on the part of fifty people should mean that the experience of each shall be increased enormously. If all start at the base many of the mistakes made will be general, or at any rate to the greater number. Although we learn more by our own failures than by those of others, the wiser policy is to study as far as possible what has been done previously in order to discern wherein success was not reached and, if possible, whether the causes are discoverable. As one grows older it is most interesting to note how many schemes there are which appear at recurring intervals. Each time they are brought forward these are heralded as if they were absolutely novel and had never been thought of before, whereas the fact is they were tested years ago and discarded. That in itself should be no deterrent to further attempts, otherwise small progress would be made. If Mr. Chas. Hearson had been discouraged by the records of previous attempts to solve the problem of artificial hatching and which had failed practically, the story of the past thirty years would have to be written differently. I have no information on that point, but should imagine that the gentleman named had made as exhaustive a study as possible of what had been attempted and accomplished by previous inventors and experimenters, as far as records were available, in order to learn the results arrived at. So far as the poultry industry is concerned, much loss would be avoided if in every case those taking up the work on broader lines followed this example.

One of the most serious evils of short-sightedness at the present time is that pupils are received and taught on plants where new methods are being tested and which as yet are in the purely experimental stage. The effect can only be that instruction given and experience gained may be absolutely false. I was some time ago on a poultry farm where there were several pupils. On the lines laid down it could not possibly succeed. In fact, the poultry farm would have come to an end



long before had it not been for the fees of students. It has gone the way of all flesh since that time. No such place is justified in undertaking teaching of what is doubtful even under the most favourable conditions.

#### " BIRD CAGE " METHODS.

Recently I have been looking over what has been published both in this country and America within the last six years as to the small unit system, to which I gave the above name in the *POULTRY RECORD*. Enthusiasm and zeal are praiseworthy in the extreme; when unaccompanied by discretion these are further instances of

used in this way were replaced systematically and regularly and not bred from. That it could be a commercial proposition on a larger scale was a totally different question. What is most suggestive in this connection is the sudden stop. The stream has been turned into another channel. Instead of small " bird cage " houses, huge single or double-decked buildings are being advocated, respecting which I wish to say something at another time. So far as I am aware, not one of the attempts made to run poultry farms, whether to produce eggs or chickens for market or for growing stock for sale on these lines, has proved profitable. It may be feared that a considerable amount



**OUTSIDE FATTENING CAGES ON MR. JOSEPH OLIVER'S FARM.**  
(See pages 499 to 501.)

[Copyright.]

myopia. To read what the advocates stated as to the possibilities of such system, more especially the statements set forth in America, it was evidently believed that the future of the poultry industry was to be almost entirely in the direction of that form of *intensifitis*, a malady which has at the base a remarkably virile microbe, although as yet unnamed. Those who foreshadowed what the effect must be were regarded as antiques, if nothing worse. That the six-hen unit may be successfully carried out by back-yarders has been known for a generation or more, though probably varying somewhat from the later forms, and as a means of providing recreation or supplying eggs for the owner's household, so long as the birds

of money has been lost in this way. The shortsightedness of ignoring effect upon the birds kept or bred under such conditions is surprising in the extreme. There is the secret of this and many other failures.

#### BREEDING QUESTIONS.

Many of our ideas as to breeding and management of poultry have been founded upon very limited experience, both as to numbers and range. In this direction fancy methods have been very misleading. What may be and is done by exhibitors demands the fullest reconsideration under utilitarian conditions. Fanciers have, however, learnt what is too often ignored by utility men—



namely, that they only expect a portion, often a small one, of the youngsters will be fit either for the show-room or the breeding-pen. In connection with practical poultry a much wider range of view must be taken, and selection should be on totally different lines.

The fancier can afford to in-breed to a certain extent; in fact, he is often compelled to do so. My view is that no greater form of myopia can be met with than for the utility man to adopt such system, as he is simply sacrificing the future for the present. One of the greatest dangers with which the poultry industry is threatened is due to the adoption of what must, under domestication, be regarded as false methods of breeding on the one side and forcing laying on the other. It may appear to be immediately satisfactory. That, however, will not continue. Already signs are evident that some of the stocks which have been pedigreed to death are losing that which is of the greatest moment—namely, physical vigour, without which there can be no permanency.

#### WANT OF SELECTION.

A question arises in this connection which has never received the attention it deserves, at any rate by utility poultry-breeders—namely, what proportion of the birds he breeds annually are fit for reproductive purposes? In this direction the fancier operates upon sounder lines. He does not expect that more than a modest percentage of the chickens reared every year will be fit for exhibition. The remainder are "culls" or "wasters." In this direction there is considerable difference as to degree. Even with the very best breeds probably not more than 10 per cent. are retained in this way. In some cases I have known the average to be much less. Many years ago, in visiting one of the most skilful breeders of Dorkings and noting the wonderful uniformity of his stock, I was surprised to learn that the number of chickens which had been weeded out was very much greater than had been retained. The last-named were the selected few. It was a question of compulsory survival of the fittest, or, as the late Alfred Russel Wallace said, "is really the extinction of the unfit," by which was meant, in the case referred to, those that fell below show standards. So long as exhibition breeders did not adopt exaggerated points and carry these to an excess, retaining much of the practical type and qualities, these "culls" were valuable for ordinary purposes. The mistake that is being made almost universally at the present time is due to short-sightedness, to forgetfulness of the fact that only the few are fit to be used as breeders. Until and unless that lesson is learnt the present danger will be emphasised. Pedigree breeding for egg production is bringing about a condition of affairs that may have permanent injurious effects upon the industry at large. Selection should not alone be

determined by the number of eggs laid by any individual hen, as is too often the case, but by type. I am not sure that it would not be much better if more attention were paid to racial characters than is now the case. These have values which probably are much greater than is generally admitted by many utilitarians. My own view is that it would probably be wiser if not more than ten out of every hundred pullets attaining maturity were kept for breeding purposes and only those which have been reared in a more or less natural manner.

#### THE FOLLY OF FORCING.

What has been stated above leads to consideration of how much is sacrificed by forced methods of breeding and rearing. Some of the more experienced intensive breeders have recently admitted that stock birds should not be kept under restricted conditions and that chickens intended for reproductive purposes should be given as much liberty as possible. The fact is that they, at least, have learnt practically what are the effects upon the progeny of forcing in these two directions. Death in shell, mortality in chickens, arrested development, and susceptibility to disease are in all probability largely due to breeding from yarded fowls, and from those that in their growing stages were deprived of conditional influences that make for strength and vigour in the mature bird. Again I must repeat what has been said before, that it is not what accrues in one or even a couple of generations, but the accumulation during, say, five years. That is the true test. I am not naturally pessimistic. At the same time it is evident that the myopia of many poultry breeders is leading to disaster. They are already in the rapids, and do not realise that the falls are near at hand. As was pointed out last year in connection with the Belgian epidemic, the plan adopted of growing all the chickens on forced lines and selecting from these the breeding stock for the future is a reversal of what ought to be always the case and has contributed to the result described.

#### A LIVING RETURN.

One other example of short-sightedness is on the commercial side, more especially on the part of those who want to make a living by poultry breeding. Such as regard it as a supplemental pursuit do not make a mistake to the same degree. What George P. Burnham called "The Hen Fever" upsets the sanity of many who give play to their imagination without maintaining a correct vision. As a case in point, I was assured recently by a visitor that a net profit can be made in rearing chickens for market at 1s. each over the food cost, which I at once accepted as reasonable, for there is nothing new or exceptional in that. Strange to say, there had been in this man's mind no calcula-



tion as to how many would have to be reared annually to meet the establishment charges and to leave a living wage. A modest computation would be that £50 at least would be required to cover what may be termed establishment expenses. To meet that a thousand chickens must be marketed. If, in addition, the operator wanted to make for himself £2 per week, two thousand more must be

sold, or three thousand in all. I am not sorry, except for that gentleman himself, Mr. Paynter's experiment at Haslingdon Hall failed to realise his expectations. The further trial should burn in upon people's minds what are the issues involved, the capital required, and the number of birds that must be profitably raised, thus extending the range of vision.

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## BIOSCOPICAL VIEWS OF POULTRYDOM.

By ENOS MALPAS.

### III.—THE RIVALS.

TO say that Miss Muirhead was grievously disappointed was putting it mildly; to record that she was seriously perturbed did not overstate the case; to suggest that she was angry was not far from the truth. Disappointment, perturbation, and anger did not, however, alter the facts nor provide a remedy for a condition of affairs to which she was unaccustomed, and which was disagreeable in the extreme. What made the business more exasperating was that there was no one upon whom she could affix blame, not even herself. That would have been a consolation. Had her man been negligent, or the birds themselves failed in any way, vent might have been given to volcanic, even if ladylike, expressions which would at least have proved a safety valve. The pregnant fact was that after several years of supremacy she was being badly beaten at leading poultry exhibitions by an outsider, of whom few had heard for more than three or four years. Miss Muirhead did not like it. What made it harder to bear was that she could not but know that her new rival was in possession of better birds than her own.

The Muirhead strain of Silver Spangled Hamburgs which she owned had been known for nearly thirty years as, probably, the best in the country. Her father was one of the most successful breeders of his day. He was a fancier when a working man. As the sun of material prosperity shone on him that made no difference, save that more and better birds were bred and kept and he had greater choice as a result of larger flocks. From Devonport to Aberdeen he had exhibited, and, with the usual ups and downs inseparable from showing, though the ups largely prevailed; he was nearly always to the fore. Increasing means enabled him to buy when to do so seemed desirable, though that was not very often. Marrying somewhat late in life, when he had made his position secure, his only child, a daughter, drew in the fancier spirit with her earliest breath. Long before she went to school almost every bird of the place was known to her, and when her mother

died, which was shortly after she had entered upon her 'teens, she became the companion of her father, entering into all his pursuits with ardour. Later on she looked after the poultry, conducted the correspondence relating to them, and often accompanied him to leading shows, where she followed the awards and criticised the exhibits with a zest and knowledge that few could excel. As her father aged she became the virtual, and when he died the actual, mistress of the Muirhead Hamburgs, continuing the success already recorded from year to year. There was no impediment in her way, as she had ample means, and with their old and well-tried poultryman the poultry gave her an interest which helped to assuage the grief of bereavement. She seemed to regard every win as if it were a joy to her father equally with her own.

Miss Muirhead had now passed the twenty-fifth year of life and had almost come to regard victory as her right. If she displayed any weakness it was that she brooked opposition very badly and was inclined to hold rivals too cheap, as well as being a little intolerant of opinions other than her own. Such might be expected, and, under the circumstances, forgiven. Some there were who had tried a fall with her, but failed. Others who might have succeeded better held back from making that attempt, due to a chivalrous sympathy. She seldom sold a bird. Had money been a consideration probably she might have suffered in pocket from her continuous success. Such, however, was not the case, for the cost of her hobby was fully compensated by the pleasure derived. There were those who believed that her reign was bound to terminate sooner or later, though how that would come about they could not see. Others probably wished for such a consummation. This domination was unhealthy. One or two tried to marry the hens, with the fair owner thrown in, but they had short shrift. No man capable of such a conquest had as yet come within her horizon.



A rival that must be regarded as serious had at last presented himself. At one of the later summer shows, where she and her father had been accustomed to bring out their chickens for the first time in each season, and almost invariably had things their own way, Miss Muirhead was in both classes compelled to play second fiddle. That was annoying, but at first she regarded it merely as a transient set-back.

"Never mind," she said to her man when he came with the news, though she was undoubtedly disappointed, "it cannot be helped. Perhaps the defeat may do us both good. The real test will be later.

she was disturbed by what Jack had said, for he knew a Hamburg if anyone did.

Between that time and the next show for which entries had been made, though they did not talk about the matter, mistress and man devoted every thought and effort, putting forth all the skill they possessed, in order to discern the best specimens of the flock, and to send them in the pink of condition, to do battle for the honour of the Muirhead yard. In this they succeeded almost beyond their anticipations. On the day Jack started forth in high hopes, though, as he afterwards said, he had many fears, for he had seen the rival birds which his mistress had not.



[Copyright.]

**AN EXCEPTIONALLY FINE FLOCK OF WHITE WYANDOTTE PULLETS LIVING AMID IDEAL SURROUNDINGS.**

The owner, Mr. Lewis Miller, of Buxted, is justifiably proud of these birds, claiming that they are the finest he has ever reared.

"What were the winners like?" she continued.

"The best Silver Spangles I have seen for many a day," he sadly replied. "I only remember one bird in the master's time that might have won in the cockerel class."

"Jack," she retorted, "you're getting old, and don't know what you are talking about."

"That may be, Miss," he answered, "but I know a Silver Spangle when I see it, and what I tell you is true."

"Have we been beaten yet?" she angrily replied.

"No, Miss Alice," he said sadly, "but we are in for a tough time I am sorry to say."

"Nonsense," was her hasty observation, though

It was, however, in vain, so far as the young stock were concerned. In the old bird classes they won easily. Although it was a near thing, and there were some who preferred the Muirhead team, the same exhibitor as before was victor in each of the two classes of young Spangles. The points in which the latter was superior were a clearness of ground colour in the body feathers and a definition of spangling which carried the day. What specially disconcerted Jack was that these were not the same specimens as those which had won at the previous show.

So it continued almost through the whole season. At Birkenhead, the Dairy, the Palace,



and Leeds the Muirhead birds were just one notch behind, so far as the younger representatives were concerned. The winners were in many cases fresh specimens, from which it was evident the competitor had a large reserve upon which to draw. Strange to say, he had never been seen at any show. There was an unsolved mystery about him. No one accompanied the birds. They were sent in the ordinary manner. At one or two shows the pens for which entries had been made were empty. Then Miss Muirhead won, but the doing so gave her no pleasure, for she had a sense, unacknowledged even to herself, that it was by default and not by merit. She was too proud to make any inquiries about her opponent. Others did so, however, to find that all was *bona fide*, and that it was not true, as had been suggested, the name was fictitious. A man lived at the address given on the entry forms, and there were the birds also. So the contest was watched and anticipated with the deepest interest. Many references were made in the daily Press to this tournament, all of which were as gall and wormwood to the lady concerned. It was a difficult time for those embraced within the Muirhead *ménage*. They needed abundance of grace and patience.

In the business there was just one gleam of hope. At the last two shows, save one, of the winter season to which exhibits were sent the Muirhead birds had come off better, in that at each one of the youngsters was at top, even though in the other class Miss Muirhead had to be content with lower places. This offered a little consolation. Hence again supreme efforts were put forth for the final bout. If that could be won, then the lady would look more complacently on previous losses. Even Jack thought, as he basketed the birds, that he had never handled a better team. On this occasion Miss Muirhead determined to attend the show, confident that she would return triumphant.

The fateful morning dawned, in which the hours dragged with leaden feet. She was waiting in the hotel lounge for the time of opening, when a young gentleman entered whom she knew, as he lived in her own county. He came up and spoke. She was glad to have someone to talk to, in order to distract her thoughts and help pass the time.

"I suppose, Miss Muirhead," he remarked after the usual generalities had passed, "you have come to visit the Poultry Show?"

"Yes," was her reply; "I am only waiting for the time of opening."

"That is what I am doing also," he stated to her surprise, for she did not know he was interested in fowls. He explained that he always liked to see a good show once or twice a year.

Then he added, "I suppose you have not heard anything as to the results as yet?"

"No, it is too early."

"Excuse me, Miss Muirhead," he continued,

"if I ask something of a personal nature. It is are you anxious to win?"

"That is a strange thing for you to say. But I am anxious," was her reply. "For nearly thirty years my father and I have been accustomed to regard this show as the climax of our season. Sometimes our birds have been beaten, but very seldom, and never once since father's death. I have had the most trying time we ever remember, but if success comes now it will make me feel much less what has occurred."

"I sincerely hope you will succeed to your fullest desires," he responded heartily. "But tell me," he continued, "Can you suggest why it is you have failed so much this season to hold your position?"

"Simply, Mr. Turner, who has been my great rival this season, has had better birds than my own," she answered frankly. "He has won fairly in every instance. That is evident. What concerns me most of all is that he has wonderfully improved in the quality of his stock, and mine have not. That they are as good as ever they were I know, for we thought this season's chickens about the finest ever bred on our place. In these days that is not enough. We must advance, and this I have failed to do. Oh, Mr. Baines, how I wish my father was alive."

"Do you know where your opponent obtained his stock?" asked Mr. Baines.

"No, I have no idea."

"Have you not made any inquiries?" he further asked.

"Certainly not," she emphatically responded. "That I should never do. I have no desire to pry into anyone else's affairs. It is enough to mind my own."

By this time the hour of opening had arrived. After bidding Mr. Baines "Good-day," Miss Muirhead made her way to the place of exhibition. Every step taken seemed to enlarge her fears of what might be the greeting news. Now and again hope came uppermost, but the shadows prevailed.

Access gained to the building, catalogue purchased, way was speedily made towards the Hamburg classes, where Jack was waiting.

"Well, Jack, what news have you?" she eagerly asked.

"The awards are not up yet, Miss," was his reply.

"What do you think will be the result?"

"We ought to win in pullets, but I am afraid as to the cockerels," he answered.

"Not that, I hope," she exclaimed. "That would be a poor win. I want to be first in cockerels. Our bird is a beauty."

"Yes, I know he is, and in the pink of condition. But the other is better," he sadly rejoined.

And so it proved. Honours were divided,



Each of the rivals won one first prize, and the last show of the season was a draw. The judgment was acclaimed to be right by all who understood Spangled Hamburgs. Even Miss Muirhead had to and did acknowledge thus much, though it was a hard and bitter blow to her pride. The Poultry Queen had to share her throne with another.

Everyone in the know looked forward to what another season would bring forth, for the contest was undecided and could hardly remain there, unless the unexpected happened.

The unexpected did, however, happen, as is so often the case, though scarcely in the way expected.

A couple of weeks after the show referred to Mr. Baines called upon Miss Muirhead at The Grange, where she lived, saying that he had a story to tell which might not be pleasing, but nevertheless, he must recount it.

It was to the effect that some years before he had asked her father's permission to try and win her for his wife, as he had secretly worshipped her since she was a child.

"It's of no use, my boy," said old Mr. Muirhead. "So far as I know you are in every way worthy of her, but she will take some winning. I have studied her from childhood. No man will gain her heart unless he has done something she has not, and which she admires. In position and means you are all right, but in accomplishment everything is prospective. You would only spoil your chances by speaking to her now."

No arguments could move him from this position. So a compact was made. Mr. Muirhead suggested his trying to conquer in the showroom, saying it was a hard job, but might be done, and he sold Mr. Baines a trio of his best birds at a long price, which could be done as his daughter was from home, upon a promise that he would not exhibit for two years at least. He undertook to leave a written message for his daughter in a secret drawer, in case anything happened to him, only to be revealed if and when success had been achieved. With that arrangement Mr. Baines had to remain content.

From the birds so purchased he had bred a succession of Silver Spangles, continuing steadily to improve the strain on the most rigid lines. At first breeding took place in a distant part of the country, but when he commenced to exhibit the pens were transferred to the place where they now were, and shown in the name of an old fancier friend who had kept the secret well. He himself, however, was the breeder. The time had now come when he thought her father's condition was fulfilled. He had proved what he could do, and came to reveal what had been his impelling motive, even to that which had given her so much pain—his undying love for her.

Mr. Baines was a wise and tactful man. He left without saying more or asking Miss Muirhead to say anything. To state that she was angry was to put it mildly. She, however, sought for and found her father's message, which moved her greatly. It was like a voice from the grave, full of that affection which he had ever showered upon her.

\* \* \* \* \*

It is needless to recount all that transpired



**A BLACK ORPINGTON HEN.**

[Copyright.]

**Bred by and the property of Mr. Weatherley, of Builth Wells.**

during the next few months, even if I knew it, which I do not. Mr. Baines waited and won. The Poultry Queen had found her King.

Many exhibitors who had anticipated with keen pleasure a renewal of the contest between the former rivals were disappointed when it was announced that a marriage was to bring it to a close. The next season each exhibited at alternate shows. Afterwards the Baines-Muirhead combination went on from victory to victory. What it cost Mr. Baines in hard cash to win his wife he never told.



## SELECTING NEXT WINTER'S LAYERS.

By FRED W. PARTON (The University, Leeds).



HE time is now long past when the lowest prices for eggs were touched, and for the last six or seven weeks values have been steadily rising.

The time is rapidly approaching when prices will amply repay the poultry-keeper who lays himself out especially to meet the autumn and winter demand.

In connection with utility poultry keeping there can be no more important question than the production of winter eggs, and the scarcity of eggs and the prices that have been obtained during the present year bring home very forcibly to all who participate in this industry the great advantage of obtaining eggs during the winter months. To secure this ideal the first consideration is to select the right breeds for the purpose and in the second place to select those that were hatched at the right time of the year. The majority of chickens in yards where the importance of hatching at the right time is realised have now reached an age when their appearance will give a very good idea whether they are worthy of a place either in the breeding pen or among the general laying flock for winter work. The plan that is usually adopted, and very rightly so, is to depend upon the general-purpose group of fowls for the winter supply of eggs. I have, however, found for many years past that the Leghorn, if of a reliable strain, of the true laying type, and not hatched too early in the year, will hold its own with the orthodox winter layers. If culling has been systematically done from the commencement the work of selecting winter layers should not be a very difficult task, although the time for the final "look-over" is not yet. It is not, of course, always the most likely-looking pullets that turn out to be the most prolific. We must look further back, so that regard may be had to the quality of birds from which they were bred, since the parent stock transmit both good and bad properties to their progeny. We have usually found—despite many arguments to the reverse—that the hens have considerably greater influence in perpetuating the laying qualities than have the males. This must not, however, be taken to mean that the economic properties of the strain from which the male is descended should be disregarded, since doubtless he has an influence economically as well as being the chief factor in upholding certain points in other directions. In the production of winter layers stamina is of the greatest importance. This can only be adequately promoted by breeding from well-matured parents, and hence this point must be remembered when

making selection. Those that are best qualified to lay well in winter are the birds that were hatched from two-year-old hens mated with a vigorous early-hatched cockerel. This is especially so with birds of the heavy type, such as Plymouth Rocks, Wyandottes, Orpingtons, and Rhode Island Reds. One may breed from year-old birds on both sides, say, for one season, and the results may not be apparent; but if persisted in year after year there is a strong tendency to reduce the stamina, which is of such vital moment to any bird or animal that reproduces itself as rapidly as our domesticated fowls. It is also very necessary that chickens true to the type of their respective breed should be chosen. This is, of course, of very much more importance in chickens intended for the breeding pens, since there is many a mismarked pullet unfit for this purpose, yet just as prolific as her more perfectly marked sisters. It is, however, even among those comprising the general laying flock, a mistake to disregard the standard requirements. These standards are very often considered as merely fancy points, and they do, of course, mean a great deal more to the exhibitor than they do to the utilitarian. At the same time it must be remembered that there are certain so-called "show points" that have a distinctly economic value; and when the type disappears very frequently it is accompanied by one or other of the utility properties, and quite possibly the particular one sought after by the owner.

Whether pure or cross-bred fowls are selected for the purpose of next winter's laying must be determined by each individual poultry-keeper. Which is the better, pure or cross-breeds? is a question that is somewhat difficult to answer, since birds may be bred from too long a line of pedigree stock, in which case harm may follow from the reduced stamina which, as previously stated, is essential in winter layers. On the other hand, if cross-breeding be carried on in an indiscriminate manner, without any defined object in view, their economic qualities will be as varied and as uncertain as their appearance. On the other hand, if crossing is done on proper lines and suitable birds are chosen and the mating is confined to the first cross, then there are many and distinct advantages by this method of breeding, and the poultry-keeper will not go far wrong in his selection of winter layers if he chooses them from among a good flock of chickens from a suitable first cross. Whether pure or cross-bred fowls are kept, the same thing applies to the selection of future winter layers. They must be well-grown and robust; at the same time the pullets



that appear to be too forward and give indications of premature laying should not be among the chosen. It is quite possible that such birds will lay a few eggs in the late summer, with the inevitable result that they are not to be depended upon later in the year. When the general-purpose breeds

are kept the chickens that were hatched in March and April, provided, of course, that they have been properly managed, should be in profit early in November; and these are the chickens that are most likely to render a good account of themselves in winter.

## A SANITARY AND WELL-VENTILATED CHICKEN COOP.

By FRANK ESAM.

THE suburban utility poultry-keeper has not, as a rule, the same opportunity of rearing a strong and healthy brood of chickens as has his confrère in the country. For one thing, he is more shut in and must avail himself of every possible means of giving the mother hen and her brood a sufficiency of fresh air. Nothing pulls a hen down so much as to be cooped up for six weeks in a confined space without adequate ventilation, and it is the duty of the poultry-keeper to make the conditions as close to those of Nature as it is possible to do.

In the country, rats are the principal enemy, and it is no very difficult matter to protect the youngsters against these marauders by closing up the sleeping quarters at night. But in the town the chief enemy is the cat, and woe betide the chick who wanders through the neighbour's fence, beyond the protection of its mother. Since it is necessary, therefore, to confine the hen and chickens, they should have the advantage of all the fresh air, sun and shade that it is possible to give them.

A coop roomy enough for the hen to move about freely and scratch for her food is not much more expensive to make than one of the ordinary kind. It must be divided by the ordinary rails and trap so that the chickens can be fed separately; but when they are not feeding she can have the run of the whole of it, and if it is made capable of being opened at the top and sides she will be kept in as healthy a condition as though she had free range, while the chicks will grow up without the leg weakness or cramp so common in the suburbs.

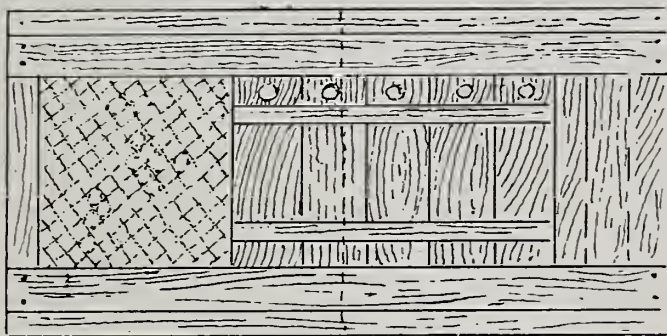
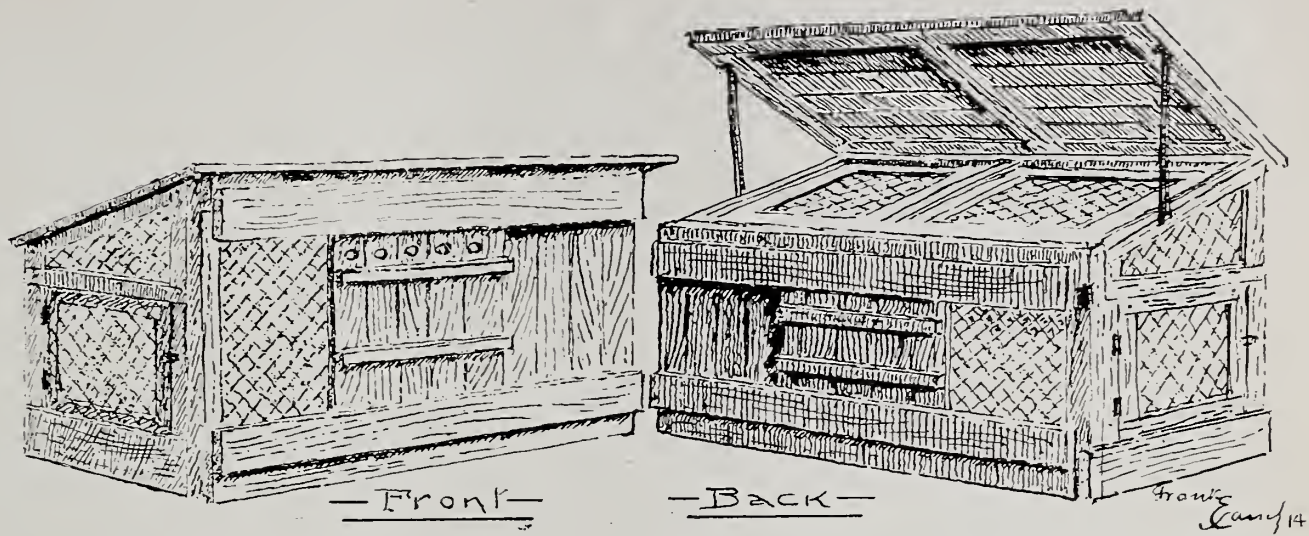
The coop, of which an illustration is given, will be found to supply the need of suburban poultry-keepers, and it is easy for the amateur carpenter to make, and quite inexpensive. It is made in sections and screwed together with two screws at each corner, and when completed will measure 4ft. by 2ft. on the outside. The front is 4ft. long by 2ft. high, the frame of which is made of 2in. by 1in., or 1½in. by ¾in., slating battens

requiring two 4ft. lengths and three of 2ft. each, the three uprights being let into the two horizontal bars at equal distances of 2ft. apart by halving so that the framework is quite flush. One half is then covered with boards on the outside and the remainder with 1in. mesh wire netting on the inside. Nailed along the top and bottom are two 4ft. lengths of 4in. by ¾in. boarding, and on two of these, overlapping 2in., two other similar pieces to form a groove top and bottom in which to run a shutter, so as to entirely close the front at night and during bad weather. The shutter will be made from ½in. boards fixed together by two 1in. battens and will be 2ft. long by 1ft. 7½in. high. The back will be made in the same manner as the front, except that it will be 1ft. 6in. high and the shutter 2ft. by 1½in.

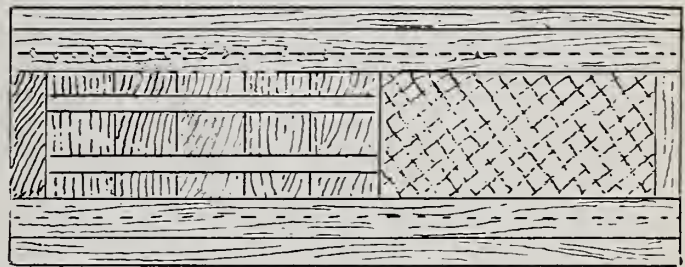
As all the illustrations are drawn to scale, it will not be difficult for the amateur carpenter to make the other sections from the drawings. The outer framings are all the same size, being 2ft. high in front and 1ft. 6in. at the back. They are 1ft. 10in. wide, that at one end being covered with 1in. mesh wire netting with a small gate which need never be used except to let the hen and chicks out if at any time it is possible to do so. The section at the other end is entirely covered with ½in. match lining or the boards from cube sugar boxes, and can be afterwards covered with tarred and sanded felt at the cost of a few pence. The middle division has four fixed rails and one to slide up and down the adjacent one as shown on the plans. These rails will be made from 1in. by ¾in. batten and will be set two inches apart unless made for a heavy breed, when they must be set closer together to leave a wider opening in the centre.

The roof must be made separately from 2in. by 1in. battens and will overlap an inch all round, measuring 4ft. 2in. by 2ft. 3in. It is covered with boards and then with tarred felting, and is fixed on the upper edge of the front by three 2in. butt hinges. When all the sections are screwed

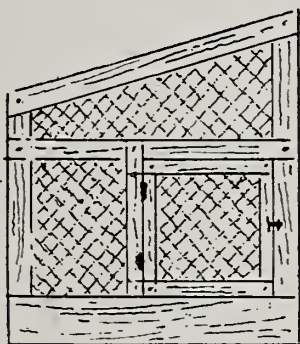




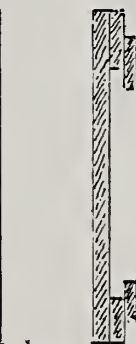
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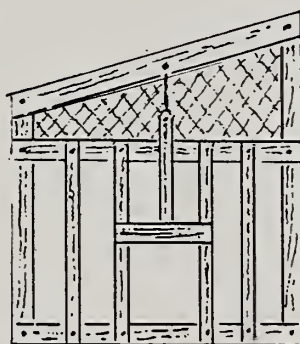
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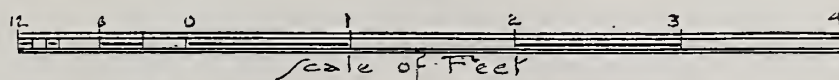
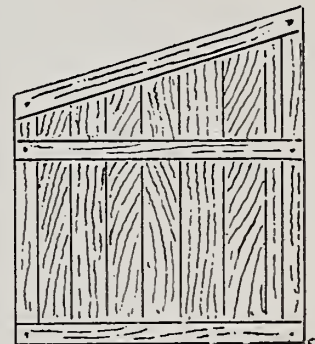
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PLAN OF A SANITARY AND WELL-VENTILATED CHICKEN COOP. (See preceding page.)

[Copyright.]

together at right angles, nail four fillets of 1in. by 1in. battens on the inside of the side sections 1in. from the top. Now make two frames of 1in. by 1in. battens to fit into the spaces, and on the same slope as the roof, and cover them with wire netting. These will drop down on to the fillets, and will be on the same slope as the roof, and flush under it. They will lift in and out, when required to attend to the chickens or to clean out the coop. Two iron stays 1ft. 6in. long, such as are sold for use on a fanlight, must be fixed one on each end of the roof. During the warm weather the roof can be opened and the shutters slid back to admit the sun and air, or regulated to give shade when the sun is too powerful. The end which is open should face the South as nearly as possible.

The floor of the coop portion must be boarded on the upper side, so that the thickness of the battens will raise it slightly from the ground. Thus the surface of the floor will be on a level with the bottom rail of the centre division, making the coop easy to clean out from the top, without having to tip it up. If the intrusion of rats is feared, the remaining part of the bottom can be

covered with wire netting. This has its disadvantage, unless the grass is thick, in which case the wire will be buried in it. Rats, however, do not often invade a suburban garden—there are too many cats about for that; and it is better to dispense with the wire netting if possible. In any case, unless the coop is placed on earth which is constantly dug over, a box of ashes or dry soil must be provided in which the hen and chicks can scratch.

The materials required for the coop are as follows: 75ft. run of 1½in. by ¾in. slating battens; 50ft. of 1in. by ¾in. battens; a quarter of a square of ½in. match lining or half a dozen cube sugar boxes; 18ft. run of 4in. by ¾in. boards; 4yds. of wire netting, 1in. mesh and 2ft. wide; 3yds. of felt; 3 pairs of 2in. butt hinges and screws; 1 pair of 1ft. 6in. iron stays; 1 dozen screws and sundry wire nails. The total cost should not exceed five shillings.

This coop can be used even after the chickens have left their mother. In this case a board 1ft. wide should be fixed along one side of the sleeping compartment 6in. above the ground on which they can roost.

## MODERN SCIENCE, AND POULTRY PROBLEMS.

### IV.—THE INHERITANCE OF ACQUIRED CHARACTERS.

By OSCAR SMART.



WE are now in a position to understand not only the nature of acquired characters in fowls, but also the actual forces acting as modifying influences.

The next question to be considered is their inheritance. Is the modification in any way represented in the germ-cells; can an acquired character in our stock be transmitted to that stock's offspring as a pure genetical factor?

To those who have carefully studied our last paper this question will be of the greatest importance; for it is clear that if an acquired modification is inheritable more than half the difficulties which now confront us must immediately disappear.

Science is divided on the question into three distinct classes. These are:

1. Those who submit that certain acquired modifications—namely, those that appear in each successive generation—are undoubtedly inherited.
2. Those who believe that modifications brought about by use or disuse can accumulate in such a manner as ultimately to be represented in the germ-cells, when, as a genetical factor, they are transmitted to the progeny.

3. Those who assert that no acquired modification, whatever its nature, can be transmitted from one generation to another.

It will therefore be seen that in this article we have come face to face, as it were, with a debatable question—one upon which different scientists cannot agree, and one which we ourselves intend to approach with every deference to those who hold views at variance with our own.

#### **Alleged Inheritance of Acquired Characters.**

It must be admitted that in many instances acquired modifications appear to be transmitted by the parents to the progeny, and it is a very remarkable thing that in such cases inheritance seems to proceed along perfectly normal and regular lines. In fact, the inheritance is almost too regular to be regarded altogether without suspicion. When a new character appears by ordinary genetical variation, that variation is not always inherited by all the progeny bred from the mutating stock; but in those cases where an acquired modification is alleged to have been inherited it appears in all the offspring without a single exception. I will give an instance of



each kind of variation together with its apparent transmission, in order to show the marked difference existing between them.

1. If a Bantam-like condition arises as a simple genetical variation, and two such birds are mated together, the Bantam-like size will only be transmitted to a small percentage of the offspring, the majority of which will be found to develop to the normal size of their grandparents. 2. If, however, the Bantam-like condition arises as an acquired modification, due to the birds having been reared at a high altitude, all the progeny from such stock, if bred and reared at the same altitude, will exhibit the same modified size as did their parents—they will not, under these conditions, revert to the normal size.

Now, it is quite obvious, if a little thought be given to the matter, that the apparently general inheritance of smallness, in the latter case, is a very suspicious circumstance—so suspicious, indeed, that we are compelled to doubt whether in actual fact the modification has been inherited or whether, as is more likely, it has been acquired by the progeny just in the same manner as it was acquired by their parents. For we have to remember that the conditions remain unaltered; if they could modify the first generation, surely they are able similarly to modify the second!

Clear as this may seem, it is not generally recognised. Those who believe in the inheritance of acquired modifications often forget that in these alleged cases the forces which modified the parents may still be at work modifying their young. Where this is so the modification certainly has the appearance of having been inherited, but—and it is this point that we have to mark—such apparently simple cases are more often than not deceptive. To prove the inheritance of acquired modifications the offspring of modified forms should be reared in an environment in which these particular modifying influences do not exist. If, even under these conditions, the modification appears in the progeny, then you have a clear case of inheritance; but this proof, so far, has not been forthcoming.

It is very easy in the poultry world to overlook these important facts; it is also very disastrous. A breeder may easily improve the leg-colour of yellow-legged breeds by rearing them on very rich pasturage. As, under these conditions, each generation is being modified in this respect just as was the generation that went before, it is quite easy to conclude that this improved leg-colour is being inherited. The fallacy of such a conclusion would be apparent if a client bought some of this stock to improve the leg-colour of his own flock; supposing that he reared his birds on earth runs, he would be bitterly disappointed by the results. We do not wish to suggest that rich leg-colour is not inherited, for we all know that it is; we

merely wish to point out that in this and many other respects a character must not be judged on its "lace value"; we must learn to make a sharp distinction between genetical variation and acquired modification even when, as in many cases, they *look* exactly alike.

In nearly every case that science has brought forward in proof of the inheritance of acquired characters it can be shown that the progeny has been modified after and not before birth, and that this modification has been due in their case, as in the case of their parents, to peculiar environmental conditions. In this respect the small and white hands of Society women, the sightless condition of the mole, the abnormalities of the plaice, and many other acquired characters which are apparently hereditary might be studied with advantage.

Some diseases, and more especially tuberculosis and kidney troubles, are undoubtedly acquired; the former by infection, the latter by incorrect dieting. Both of these diseases will frequently run through several generations and are consequently sometimes thought to be hereditary; actually, however, this is not so. In the case of tuberculosis the apparent inheritance (in birds) is due to the yolk of the egg becoming infected with tubercle bacilli while still in the ovary, or, in some cases, during its passage down the oviduct. This being the case, when such an egg is incubated the developing embryo naturally absorbs the bacilli with the yolk; it becomes infected and is born tubercular. That is how the apparent inheritance is explained.

In spite of the fact that I have known generation after generation of fowls to suffer from various forms of kidney trouble, I have never yet known a newly-hatched chicken to show any sign of diseased kidneys. The trouble develops later—develops, in fact, when the system of faulty feeding which ruined the parents has had sufficient time to ruin their progeny. Here again we have no evidence of the inheritance of acquired characters.

#### Inheritance of Use and Disuse.

It is suggested by many that the effects of either use or disuse may, in the course of time, accumulate into a specific genetical factor, and as such that it may become inheritable. This view dates back to the days of Lamarck, and is, indeed, inseparable from his theory of evolution by adaptation. The neck of the giraffe was supposed to have been brought to its present great length by generations of these animals stretching their necks in order to devour the foliage of trees; the snake was evolved from the lizard, and it is supposed that the disappearance of the limbs was directly due to some of these reptiles taking up their abode in long grasses where limbs ceased to



be of any assistance to them and became instead a great inconvenience. It is submitted that these and similar modifications, brought about by the accumulated effects of use or disuse, are inheritable. We have several such cases in fowls, two of which must be dealt with here.

**TRAINING.**—As pointed out in our last chapter, certain breeds are subjected to a course of training with the view of obtaining what is generally known as "reach." I am not in a position to say for how many generations this method of modifying type has been resorted to, but this I do know: that while this training has not been practised on any breed as a whole, but only on the exhibition specimens of certain breeds, still it has always been these trained individuals that have been used for stock. Now, in Game, Malays, and other kindred breeds, this "reach" appears to some extent to be inheritable, and it is very easy to conclude that the accumulated effects of training are, in a measure, responsible for this. I think, however, that before arriving at so serious a conclusion we should most carefully study genetical variation, which might even more easily bring about a similar result. We have to remember that Game, for instance, had a certain amount of "reach" long before "training" came into vogue; we have to remember that training is still essential to bring this "reach" to exhibition requirements; we have to remember the effects of selective breeding in ordinary genetical variation. What, then, is due to the inheritance of modifications and what to genetical variation?

**DEVELOPMENT OF OOCYTES.**—The next case to which I wish to draw attention is the development of the oocytes, a process which is greatly modified by the removal of eggs from the nest. As Dr. Raymond Pearl has shown, and as I myself can testify, the *average* number of oocytes in the ovary of the domestic hen is well over 2 000. Now, the egg must be regarded purely in the light of the female reproductive cell, it must be remembered that the first law of Nature is that the species must reproduce its kind, and that, in order that it may do this, the organs of reproduction must be capable of a much larger output than is in many cases absolutely necessary. The adaptive nature of these organs is illustrated in almost any seed-producing plant. If the plant is allowed to run to seed it ceases to throw up fresh blooming-spikes, but if the flowers are continually cut so that seed

is not allowed to form, they will continue to bloom until the plant is exhausted or until it is killed by frost. This constitutes the struggle for reproduction against adverse circumstances. As with a plant, so it is with a hen. If you allow her eggs to remain in the nest she will complete her clutch and then proceed to incubate them; if, however, you remove the eggs daily the period of production will be considerably prolonged; a call is made upon the ovary and the ovary responds.

This is a very fine example of the modifying effects of use. Is this modification inheritable?



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**A FLOCK OF WHITE LEGHORNS ON A GERMAN FARM.**

We have to answer this question remembering that the modifying influences are still in operation. We have to answer it after deciding what would happen if we were to cease to remove the eggs daily; and, moreover, we have to draw a sharp distinction between increased production due to modifying influences and increased production due to genetical variation. I fear that when all these facts are taken into consideration they will not endorse the view that acquired modifications are inheritable.

#### **Scotch Greys.**

As indicated by the name these birds are of Scotch origin, and are a very useful variety. They have white legs, are similar to the Plymouth Rock in plumage, and are exceedingly good layers of very large eggs. They are exceptionally hardy, and will thrive well everywhere, even under the most adverse conditions.

We must not omit mention of the drinking water. The yard fowls and those in the small runs must have a constant and fresh supply. Tap water may not have the body of that which the poultry can get from the springs and streams; but if it contains a good amount of chalk it is very beneficial for the birds.—*Poultry.*



## POULTRY-KEEPERS AND FOX-HUNTERS.

By MISS GALBRAITH, Hon. Sec. Poultry-Keepers' Protection Society.

LIFE is so complex! This was the frequent refrain of a perplexed country parson to me, and I imagine that harassed poultry-keepers will agree. But if the complexities puzzle us, there is plenty of amusement in its ironies.

If ever there was a society that foreswore politics, surely that was the Poultry-Keepers' Protection Society, yet within the last few days we have arrived at a situation in which our harmless deliberations have materialised into what an inspired Press describes as another electioneering "sop." And the irony lies in the fact that our most effective supporters comprise men of every political persuasion and of every class. Yet our simple-minded Bill is viewed by the Unionists as a deep-laid Ministerial vote-catching scheme, so that when the first reading was forced to a division the Opposition sat still, not one Unionist, I understand, voted (I ought to say not one was allowed to vote, for some tried unsuccessfully to get through the *No* door, where their Chief Whip stood guard), while the measure was carried through the preliminary stage by 277 votes to 9, after creating much laughter and "chaff" in the House. The attitude of our enemies reminds me of a fairy-tale I once read on "How the Guinea-Pigs Lost their Tails." A village boy, finding his music unappreciated by his friends, went piping down the meadows where the guinea-pigs were at their toilet. They had just put their tails in curl pins when they heard his music, and were so delighted that they laughed, and laughed, and laughed for a day and a night and a week and a year, until, when they had done laughing, their tails, left unheeded in the curling-pins, had fallen off, never to grow again.

I ask nothing better than that all our enemies, of whatever political complexion, may on each future occasion sit still and laugh, and while they are laughing—

But if the fox-hunter sits still in the House of Commons he and his friends have been active enough elsewhere. When high-spirited children are silent, with a prolonged and intense silence, we know that mischief is brewing; therefore, I have closely watched the game of the powers that be, for during the last four years not one M.F.H. or hunt secretary has taken notice of our doings in public. In private, and behind the scenes, much has been done.

First, those connected with the agitation against the fox were dealt with on the principle that every man has his price. In one or two cases this has been successful, and finding that the hunting people round have been buying up their

poultry at high figures, individuals have desisted from shooting or writing against the hunt.

Next, since the conference with the Masters of Fox Hounds the executive of the poultry clubs has been brought into the hands of the hunts more securely by the appointments of more fox-hunters to the committees, so that the fox-hunting presidents of those institutions now control thoroughly clubs representing over 2,000 poultry-keepers, while the unfortunate National Poultry Organisation has been swallowed whole by the Agricultural Organisation Society, and its secretary, the one genuine representative that poultry-keepers had, has been forced to resign, so that the poultry industry is now completely in the hands of the powers that be; and as we all know that the farmers' clubs throughout the country are dominated almost entirely by the large fox-hunting farmers, it becomes clear that poultry-keepers must help themselves.

But the most insidious move of all has been the artificial "booming" of the intensive system. The revelation that the table poultry industry of Sussex was being ruined by foxes came nearer rousing the country than anything. At all costs that cry must be stopped. What simpler than to show that poultry paid best if altogether shut up in small houses? Accordingly the boom was begun. No matter that the hens died off by the score after the first few months; there were always plenty of beginners ready to buy more houses, so, although over 1,000 pullets were only producing twenty eggs a day in January on one of the plants concerned, while all the other birds had rump, still the boom was kept up. This was not enough. It had to be proved to the Heathfield fatteners that it would pay *them*, therefore the powers that be found the money to bolster up the Cheshire experiment, which is being repeated elsewhere, and will doubtless be blandly proposed for Sussex in time.

And all this time the hunts were quietly laughing at the unsuspecting poultry-keepers, and pursuing their old tactics of evasion and oppression.

Last winter six farmers in different counties, all unconnected with each other, or with us, commenced open shooting owing to the treatment they received. There are now fourteen hunts, wealthy and most popular, within whose country open shooting is carried on, because of non-payment.

And so we brought our Bill to Parliament, and Mr. Kellaway introduced it with unexpected results.



Now there comes from the side of the hunts the proposal for another conference, but I have told the retired Master from whom it comes that those concerned with the last have been made to suffer so that there will never be another. His proposal is that all the poultry in England should be wired into enclosures at the expense of the hunts and the Government. To this we object on the ground that a hungry fox will go over six-foot wire with ease, for while you can keep a well-fed fox in, you cannot keep a famished vixen out. Further, we do not believe that farmers will consent to forego the free and full use of their land, and to put it into the power of the local hunt to dictate how much poultry each may keep and just where he may keep it. Life is indeed complex! And the only hope for poultry-keepers is that they should stick to their guns and give us a good backing. Let them all write to their M.P.'s urging speedy legislation, and if they will only subscribe to our funds we will undertake to keep the matter constantly before the Government by means of circulars, memorandums, and, if possible, petitions. But all these cost money, and poultry-keepers should remember that the hunts have power, wealth, and energy at their disposal in unlimited amount, while the average poultry-keeper appears to be sadly lacking in all three. Now is the time for him to show that he knows how to defend his own interests, by gun, pen, and law, but the greatest of these is the pen at this moment.

## FOWLS AND FOXES.

[Below we give extracts from some of the comments which have appeared in the Press and letters upon the question representing those who suffer and those whose pleasure or pockets appear to be at stake. What is of supreme importance is that the question shall be ventilated.—Editor, *I.P.R.*]

**A**DVERTING to Mr. Kellaway's Bill, the *Globe* said that: "If hunting men are wise they will offer no opposition to the Bill introduced by Mr. Kellaway for the better protection of poultry-keepers. It is only by a system of fair give-and-take that the sport of fox-hunting can be saved, and though we are perfectly aware of the excessive claims frequently made upon the hunt, there is a very genuine grievance which calls for redress. Poultry-farming is a rapidly growing industry, and one which it is most desirable to foster. That it suffers very seriously from the depredations of the foxes is not denied, and, according to the hon. secretary of the Poultry Keepers' Protection Society, these amount to something like 20 per cent. of the annual earnings. Compensation is at present arranged on a most unsatisfactory basis, and unless some steps are taken to make it adequate the old reluctance to destroy the foxes will speedily disappear. Hunting men must be content to pay a little more for their fun or they will lose it. The poultry farmer will not care whether he sells his produce to the higgler or

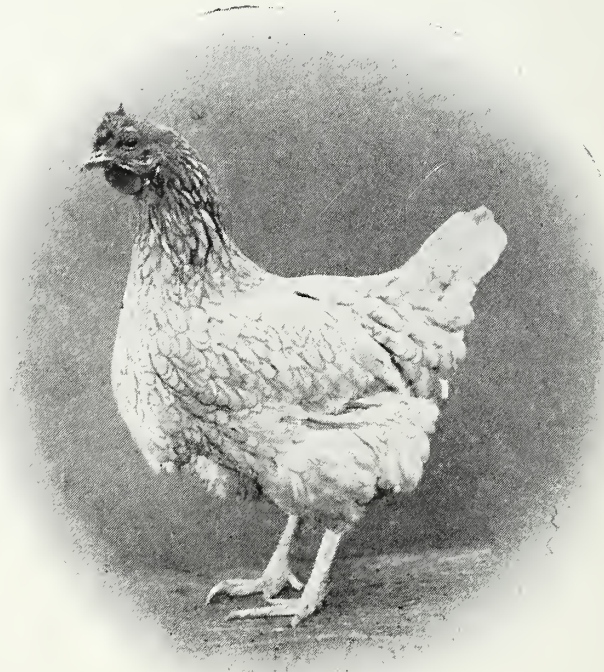
the fox, but you cannot expect him cheerfully to accept two shillings for birds which he could have sold for three."

Mr. T. F. Dale, writing in that paper, stated that this Bill, if passed, "would be the most severe blow dealt at hunting in our time. Hunting can only exist on sufferance and by means of a common understanding between occupiers of land and hunt officials."

"A law, with the consequent legal proceedings, would create much ill-feeling, harden the opposition of those who dislike hunting, place a weapon in the hands of a few malcontents, which would, and very probably might, destroy hunting in any given country altogether. The writer seems to show the common error that hunting people will not and do not pay for their sport. I am in favour, as I suppose all hunting people are, and always have been, of prompt and liberal payment for genuine claims."

"These never find much difficulty in getting redress in most hunts, but this Bill would put a weapon into the hands of a certain class. Legislation is, like force, no remedy for such matters as depend on neighbourly feeling and the give and take which is essential to the peace and happiness of the countryside."

Messrs. Cook and Silver, of Stone Cross Poultry Farm, Ashurst, Kent, write in the *Times*: "During the last four years we have lost 800 head of poultry killed by foxes. All these have been picked up at different times and counted, and we do not know how many the foxes have carried away. Taking these at a moderate price of 3s. each, decidedly under their value,



**A BLUE WYANDOTTE HEN.**

The property of Mr. George, of the Orpington Poultry Farm.

we have lost £120. We have not had one penny compensation from the Hunt, though we have done our best to get it. They tell us our farm is in the wrong district, and advise us to move where there are no foxes! Has anyone heard of such a ridiculous suggestion—move a business because it interferes with sport? Last season five cubs were dug out, quite near to the fields our poultry run on. The ground was



strewn with feathers, carcasses, and heads of chickens. The Master, who was present, had to admit he knew where they came from.

"Our poultry are shut up every night, which, of course, requires extra labour and is harmful to the birds, yet we do not mind the extra trouble and expense of protecting them from foxes, but when the foxes come in broad daylight and take our birds we expect



**A WHITE ORPINGTON COCKEREL.**

**Snapped at the Orpington Poultry Farm.**

a little consideration from the Hunt. We should like to say we know numerous others who are treated in the same way, who are not in the same position as ourselves, are therefore unable to air their grievances in the way we can; hence the reason we hear so few complaints direct from farmers.

"We are certain that the time is not far off when the interests of poultry farmers shall be considered, that if fox-hunting is to be continued those people who in the past have been quite happy at getting their sport at the expense of what is other people's living shall be made by law to pay for the damage done by foxes to poultry, which in the past has had to be borne by us who are less able to bear the expense."

"Sporting Farmer," in the same paper, says: Some hunts are ready to pay 1s. per head for fowls and 5s. for turkeys. This represents about one-quarter of their value, and the farmer is expected to collect personally from a village public-house, perhaps five miles away, and waste the best part of the day (including waiting) to collect this paltry acknowledgment. Surely such meagre compensation (which is no compensation) should be paid in a courteous manner, and it is time all hunts acknowledged the never-failing courtesy of the smaller farmers, who cannot afford to hunt, yet provide sport free of cost to huntsmen, submitting tamely to have their hedges torn, fields and crops trampled without a murmur. I am writing this hoping it will help the hunting men to realise how largely they are indebted to small farmers, who, I repeat, cannot afford the losses inflicted upon them, often by strangers, who do not even spend any money in the locality."

The *Westminster Gazette*, commenting on one of the letters quoted above, thus deals with the subject in its editorial columns: "Those who are inclined to make light of the case of the poultry-keeper against the Hunt should read a letter in the *Times* to-day from a firm which is one of the largest breeders of poultry in the country. During the last four years this one firm has lost 800 head of poultry killed by foxes. These have been already picked up; it is not known how many head the foxes have actually carried away. At 3s. a head—a moderate price—the loss on the 800 is £120. Yet not a pennypiece has been recovered from the Hunt: 'They tell us our farm is in the wrong district, and advise us to move where there are no foxes! Has anyone heard of such a ridiculous suggestion—move a business because it interferes with sport? Last season five cubs were dug out, quite near to the fields our poultry run on. The ground was strewn with feathers, carcasses, and heads of chickens. The Master, who was present, had to admit he knew where they came from.' We agree with the writers of the letter that if fox-hunting is to be continued those people who in the past have been quite happy at getting their sport at the expense of what is other people's living must be made by law to pay for the damage done by foxes to poultry, which in the past has had to be borne by those less able to bear the expense. We should have thought that the Hunt would have been too proud to have their sport paid for by poultry-keepers."

The blame is put on cats and rats by "A Tenant Farmer in a Hunting Country," who writes thus to the *Times*: "Reading the letters of some of your correspondents about hunting people and hunts would make one believe they were the biggest thieves on earth. They tell you of the hundreds of pounds of damage done by foxes, when nine times out of ten the damage is done by their own cat, or rats and other vermin. As for claims paid by hunts, I will guarantee there is half as much more paid for poultry claims as there is damage done. I have had twenty-six years' experience of farming and poultry rearing, and find the rat the poultry man's biggest enemy, but the fox always gets the blame."

"I think if your correspondents would take the trouble to see that their fowls were shut up at night, and that their neighbour's cat had nothing but rats and mice to eat they would not have so many chickens killed."

Mr. W. Phillpotts-Williams, of Liskeard, Cornwall, in a communication to the *Morning Post*, takes a serious if a middle view: "With regard to the Bill before the House of Commons, described in your issue of the 9th, making it legal for farmers to claim damages for poultry killed by foxes, I see the thing was treated rather as a laughing matter. I am afraid I take a more serious view myself, with deference to all concerned. If this Bill is carried, and really acted on, the lesser hunts will certainly go to the wall. They cannot meet the expenses that will be charged to them. This will mean (for it is the beginning of the end) that the great reserve of 200,000 riding horses will come to an end. The extinction of this force will be a serious national danger, and, as it is almost the last genuine reserve of riding horses, the question



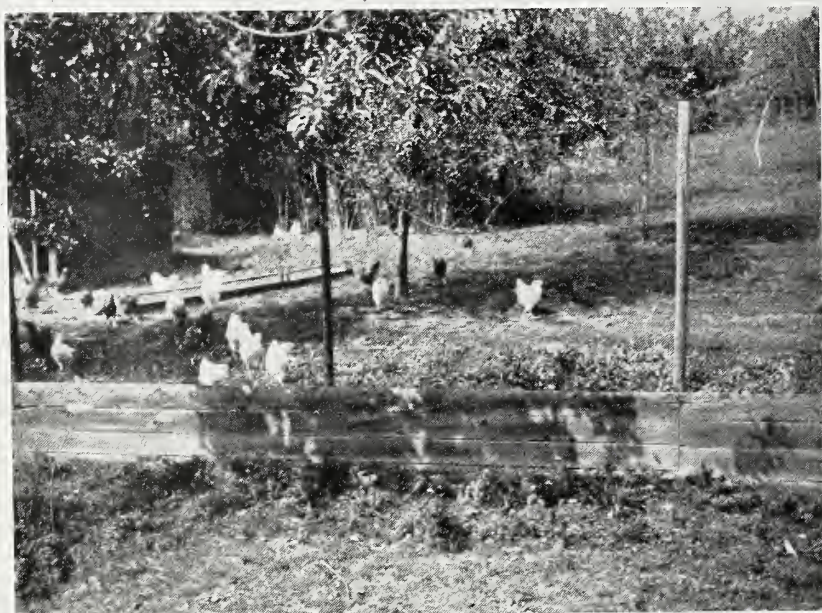
should command the earnest consideration of the country. For my part, I think the matter can be settled and a remedy found—that is, if we are prepared to tackle it and go in for a drastic reform. I should advise shutting up the poultry in wire enclosures by degrees, right through the districts. If the present amount paid by the hunts for damages was spent on wire netting for this purpose a far better value would be obtained for money given. It might take time certainly, but a perpetual system would provide for a lot of farms, and the improvement would be permanent. I should abolish the present system of payments altogether. I do hope this Bill may be held up for a time and the matter considered from a fresh standpoint. A large proportion of our best horses fill the ranks of foreign armies. If we are to be mounted only on the corks and screws that are left behind it will be a poor look-out for England.”

“Agricola,” in the *Globe*, puts the case of the amount of money expended by hunting men on their sport, though he does not give any reason why small farmers and other poultry-keepers should bear heavy losses for the pleasure of others, and says: “It is sport alone which keeps men of leisure and means in England in winter, and should they travel abroad disaster must overtake many other trades and occupations, commencing with architects, builders, and decorators, and ending with domestic servants, male and female—usually sons and daughters of needy agricultural labourers, &c., and whose earnings, board and lodging alone, at present keep their parents’ heads ‘above water.’”

Commenting upon this the Editor of the *Globe* says very wisely: “That fox-hunting is good for the national character, that it leads to a most desirable diffusion of money, and that it helps farmers by keeping up the price of the best hay and oats, are all undeniable propositions, and we should be quite as much distressed as our correspondent if the sport came to an end. It is just because we are so anxious that this disaster should be avoided that we urged hunting men to pay serious attention to the complaints of the poultry farmers and secure their sympathy and support by providing compensation on a generous scale. ‘Agricola’s’ experiences are, we fancy, rather exceptionally fortunate in this respect. On all sides there are repeated complaints that the compensation paid for the fowls killed by foxes is inadequate in amount, and is only obtained after considerable delay and much disagreeable discussion. It is of no use to tell poultry-farmers that if they do not like the present system they should move to a non-hunting district. They will reply that they prefer their livelihood to sport, and it is their views which will prevail.”

The *Daily Telegraph* puts the matter clearly and

concisely, showing that hunting men are responsible for compelling action to be taken: “For many years past poultry breeders in various parts of Great Britain have been perturbed as to compensation for losses by foxes, and considerable friction has existed between owners of poultry and hunts. The Poultry Press ventilated the grievances, and at last the leading poultry organisations sent (in 1910) a representative deputation to the committee of the Masters of Foxhounds Associations, who considered the matter most favourably, and at their annual meeting passed the following resolution: ‘That the members of the association unanimously recommend that fair compensation should be



ON A GERMAN POULTRY FARM.

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promptly paid for all losses of poultry by foxes, but that the same be dealt with by each individual hunt.’

“In many counties, however, the spirit of the resolution was ignored, the hunts failed to recognise their moral obligations, and poultry-keepers continued to suffer heavy losses year after year. The growth of the poultry industry, however, it is felt, demands justice, especially considering the important part it plays in the progress of British agriculture. Breeders, whilst expressing loyalty to the sport of foxhunting, and disclaiming any hostility, have pressed for just compensation, and recently invoked the aid of Parliament.

“During the past week leave was given in the House—by a majority of 268 votes—to introduce a Bill to give farmers, poultry-keepers, and small-holders a right to compensation for loss of poultry by the depredation of foxes and for other damages caused by fox-hunting. Mr. Kellaway, M.P., made out a strong case for poultry breeders, and explained that under the provisions of the Bill each hunt would be obliged to define its area, and would be liable to be sued in the county court for any loss proved to have been caused by foxes within that area.



"The Bill is well framed, and undoubtedly appeals strongly to the fox-hunting members in the House, whilst it certainly represents the views of all poultry-keepers, especially those who have suffered heavily for many years by losses and unfair compensation. Flocks of well-bred poultry in various stages of development are a most valuable asset to the farming community and deserve protection, whilst it must be admitted by men of experience that the present scale of compensation paid by hunts is most inadequate and very discouraging.

"A careful and systematic method, however, must be devised which shall prevent frauds being perpetrated, and here the good offices of the National Poultry Organisation Society, Poultry Club and Utility Poultry Society should be solicited, and valuable assistance given. The favourable support manifest in the House at the first reading of the Bill augurs well for its ultimate success and the settlement of a long-felt grievance."

In the same journal Mr. W. Phillpotts-Williams, whose letter is quoted above, suggests a conference, which he is endeavouring to arrange, but does not say of whom.

Sir Samuel Scott says, in the *Times*, that: "In April, 1910, the committee of the Master of Foxhounds Association circularised 35 different hunts asking for a return of the amount paid in the previous year for poultry claims.

"The replies showed that the 35 hunts had paid the total sum of £15,989 the previous year for such claims, being an average of £457 per hunt.

"If the rate of 2s. per head, as given in the correspondence, is correct, it shows that in the season 1909-10 no less than 159,890 head of poultry were compensated for within the limits of 35 hunts as the result of depredations by foxes.

"I may add that all returns were given by either the master or the secretary of the hunts, and are therefore quite authentic, and that the circular was sent to hunts of all sizes, the average hunting days of the 35 being 3½."

A "M.F.H.," also in the *Times*, thus records his views: "I myself only last week settled a claim of a farmer for £15. He farmed 68 acres, and stated that most of the birds had been taken during the daytime. Last year he had £10 from the hunt, and the year before £5. The claims in my hunt have increased 100 per cent. on the last five years, and yet we believe that no just claim is unpaid.

"There is a great deal of misrepresentation with reference to foxes and poultry. An article appeared in the *Times* last season, in which it was stated that the worst offenders were foxes imported from Germany and Austria, whereas foxes are subject by the rules of the Board of Agriculture to the same restrictions as dogs, and the only foxes imported into the United Kingdom for some years have been specimens for the Zoological Gardens.

"I am one of those who realise that if fox-hunting is to continue the followers who enjoy the sport must be prepared to pay more in future. We ought not to have our sport at other people's expense, and no true sportsman wishes for it."

"A Sporting Poultry Fancier," writing in the *Times*, says:

I venture to assert that the secretary of the Poultry Keepers' Protection Society is more likely to be correct

in his statement that no hunt pays full value for poultry destroyed than "M.F.H.," who contradicts him. The fact that "M.F.H." paid £15 to a farmer only last week proves nothing more than that foxes seem fond of chickens in his part of the world. How many were killed?

The reason why poultry-keepers make an outcry, and, in my humble opinion, a just outcry, is that hunts do not realise that poultry have, as foxes, more than their eating value. When a farmer near here lost his Blue Leghorn cockerel which had taken first prize at the Crystal Palace, and was probably worth at least £20, he was offered 2s. 6d. by the hunt secretary. The farmer's comment was, "The next fox I get hold of I'll send you for your breakfast."

If hounds and huntsmen were cleverer at killing foxes there would be less cubs to feed and fewer claims to settle.

Rats may be poisoned, but not that other species of vermin—namely, the fox—for at the Hayward's Heath Petty Sessions on July 20 Lady Bowyer-Smith, of Twineham Court, was summoned under the Protection of Animals Act for being a party to laying poisoned flesh on certain land at Twineham Court on June 8.

The evidence showed that Lady Bowyer-Smith caused vermin killer containing strychnine to be placed in some dead chickens and deposited in a hen coop near her coach-house. Five carcasses of fox cubs were subsequently found. She admitted to the police that she gave orders for the poisoned chicken to be put down to kill the foxes. She thought it barbarous to hunt and kill them. She had suffered great depredations from foxes. The defence was that the poison was put down to kill vermin and foxes and not to kill dogs or cats.

The Chairman (Colonel Champion, C.B.) said the Bench was in no way there to protect fox-hunting. There was great provocation to poultry-keepers all over the country through the killing of poultry by foxes, but putting down poisoned meat was very dangerous, not only to dogs and cats, but in other ways. A fine of 10s. with £10 10s. costs was imposed.

Another Bill than that of the Poultry-Keepers' Protection Society is to be brought forward under the auspices of the Smallholders' Union. This provides:

1. The Master or Joint Masters or owner of a pack of foxhounds will under this Act have to take out a Master's licence to hunt foxes within the district shown on the map attached to his application for a licence. Such licences are to be issued by the Board of Agriculture.

2. Application for a Master's licence must be signed by seven substantial persons resident within the district and all the persons who have signed the application shall be jointly and severally responsible for damage done by foxes, as if such foxes were their own animals under their control.

3. The issue of the Master's licence shall create no rights not now existing in law, but shall simply be a licence to hunt foxes with hounds under the legal conditions which direct this.

4. The licence is issued for one year.

5. Every person attending a meeting of foxhounds on horseback shall also take out a licence to hunt foxes. This licence shall not be transferable, and shall be issued in the same manner as a licence to shoot game.



6. All money received as fees for such members' licences shall be paid to the County Council and the County Council may make grants out of this money for compensation payable by the hunts for damage done by foxes to poultry.

7. Any person claiming to have suffered loss of or damage to poultry through foxes shall within twenty-four hours give notice in writing to the nearest police constable, who shall make full inquiries into the matter. The claim is then to be reported to the Clerk of the County Council, who shall inform the Master liable under this Act.

The licensee must either pay the claim within one month or notify their intention to arbitrate before a Hunt Claim Arbitration Committee, which should consist of two members nominated by the Master or Hunt Committee, two poultry-keepers appointed annually by the County Council, and an independent person appointed annually by the Board of Agriculture and Fisheries, who shall be Chairman.

## THE MOULTING OF EXHIBITION POULTRY.

THE amount of interest with which fanciers look forward to the moulting season depends upon the variety they keep. To many it means nothing more than the welcome change to new and clean plumage, whilst to some the moult brings the close of a bird's show career, and to others it is the stage which marks the development of better things. All these things may be seen by anyone who keeps Wyandottes. With the White variety the moult brings no more startling change than the discarding of the old and dirty plumage for a new and clean set of the same old

## FARMERS AND POULTRY-KEEPERS (COMPENSATION).

### A BILL TO GIVE FARMERS, SMALLHOLDERS, ALLOTMENT HOLDERS, AND OTHER POULTRY-KEEPERS A RIGHT TO COMPENSATION FOR LOSS OF POULTRY BY THE DEPREDACTIONS OF FOXES, AND FOR OTHER DAMAGE CAUSED BY FOX-HUNTING.

BE it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :

1. Every master of foxhounds shall, before the commencement of each hunting season, clearly and exactly define the boundaries of the district hunted by the pack of foxhounds of which he is master, and notice thereof shall be published forthwith in one or more of the newspapers circulated in such district.

2. Each master of foxhounds shall be liable to make full compensation to the respective owners for any damage to lambs, poultry (poultry to include turkeys, geese, ducks, fowls, or other feathered stock), hares, rabbits, or other live stock which may be shown to have been killed or injured by any fox within the boundaries of the district hunted by the pack of which he is master as defined under section one.

3. Where any master of foxhounds fails to define clearly and definitely the boundaries of the country hunted by the pack of foxhounds of which he is master, he shall be liable for all damage to live stock (as under clause two) within a radius of

thirty miles from the centre of the district hunted by the pack of foxhounds of which he is master, whether or not any part of such area may fall within the boundary of any other hunting district or districts.

4. The centre of the district hunted by any pack of hounds shall for the purposes of the preceding sections be defined as that point situated in the centre of a circle drawn so as to touch the extreme opposite points at which the meets of the hunt are customarily held.

5. When any hunt is from any cause without a master, the owner or joint owners pro tem. of the pack of foxhounds shall be liable to make full compensation for all loss through foxes as under clause two.

6. Compensation under the foregoing sections may be sued for by any person in the county court of the district in which the land occupied by him is situated, and shall be recoverable with expenses in the same way as any other civil debt.

7. Nothing in this Act contained shall be held to abridge or limit in any way the common law right to destroy foxes as vermin.

8. This Act may be cited as the Farmers and Poultry-Keepers Compensation Act, 1914.



kind. With the Silver- and Gold-laced varieties, more particularly the females, the moult frequently results in the development of serious defects that spoil a bird for the show-pen. Again with the Partridge females the first adult moult generally means the development of imperfect pullet-hood into the glories of perfect hen-hood. That is why the annual change of plumage is such an important event for exhibition breeders, and why it is regarded with such varied feelings by fanciers of different varieties.

Just now the moult looms large in importance. Some of the more precocious birds that were induced to make an early start during the warm weather of mid-June are already through and approaching perfect condition, and others that have been designedly held back have yet to cast a feather, whilst the bulk of the stock that have undergone no special treatment show that ragged appearance we naturally associate with the time of the year. It is an anxious time for everyone, for, as I have already explained, the moult is, to the fancier, something more than a mere change of plumage. He wants it to be a change for the better, and in any case certainly not a change for the worse. But a good moult depends upon conditions, and to a great extent we are at the mercy of the elements. Moreover, we are inclined to trust a good deal to chance in the matter of moulting show birds, for though scientists have shed a great deal of light upon the subject of moulting as a physical process, I am not aware that they have ever gone into the reasons for the many complexities that puzzle fanciers. For instance, we know that the weather and the season have a great influence upon the date and duration of the moult, but we are by no means certain as to what effect they have upon that mysterious process which produces the markings and colour of feathers on which fanciers lay so much stress. We know, too, that we can assist our fowls very considerably through the trying ordeal of the moult, but we are by no means agreed as to which conditions are most favourable for moulting exhibition feathers, nor are we satisfied as to what foods produce the most satisfactory results.

As I have said, some fanciers are very little concerned with these questions. With self-coloured varieties in particular, and more especially Whites, it is customary to look for a mere repetition of last season's feathers. But with some of the Laced, Pencilled, and Barred varieties, and even with some of the Black and Buff selfs, this is a very pressing matter, and no breed presents more interesting studies in this respect than the females of Laced and Partridge Wyandottes. The problems they present, too, are of opposite character, for whereas the tendency in the Laced varieties is to deteriorate, the Partridges invariably improve, in

some cases to such a remarkable extent as to defy any attempt at explanation. Many instances might be mentioned, but as an example I will only quote the case of a Partridge hen which represents the perfection of fine pencilling, and was regarded by many as the best hen out last season, and which in her pullet days, before she indulged in an adult moult, was such a moderate specimen that she could get no higher than fifth in a novice class, and might have been bought for £4. Probably no other variety can show such sensational changes.

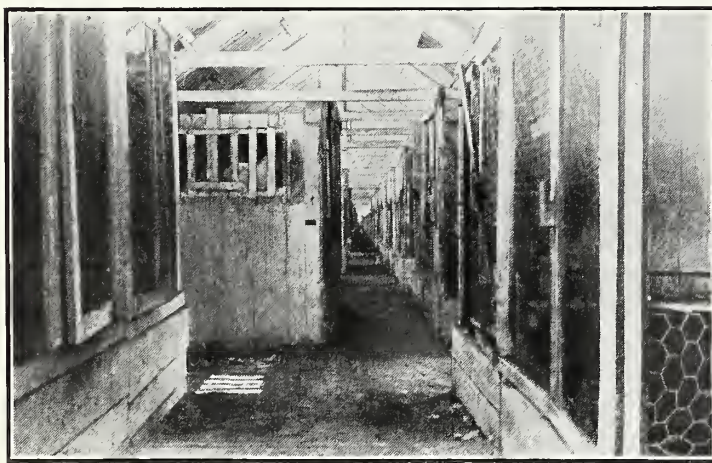
But what is the reason for it? Well, in my own unscientific way I can only venture on an explanation by suggesting that pencilling so fine and clear as we now have it in the Partridge Wyandotte is evolved gradually. Watch a chicken from the growth of its first feathers, and you will observe that in the case of fine pencilling the evolution is slow and gradual with each moult. The first feathers will convey some suggestion of what is to come, and possibly the first line of pencilling may be fairly clear, with the remainder of the feather indistinct. The next lot of feathers will be a little clearer, especially in the first line of pencilling, and again the last chicken moult will produce further improvement and bring other lines of pencilling into prominence, at the same time leaving cause for the remark that "she wants another moult to clear her." Some pullets come entirely barred in the first and even second plumage, and these are invariably less clear after the final chicken moult, lacking the formation of pencilling which, in a good moulted hen, follows the outline of the feather. I do not think the phenomenon has ever appeared to the same extent in the Partridge Cochin, because a coarser type of pencilling has always been in evidence, and even in the Wyandotte the coarser pencilled feathers, bearing no more than two lines of pencilling, are more readily evolved than those with three or four fine, clear lines.

But how can one account for the remarkable changes that occur in the moult, such as the transformation of a moderate pullet into a first-class hen? And what is the wonderful property that causes more remarkable changes in some than in others? Is the quality inherent in the pullet lying dormant until the adult moult brings it into being, or have the weather, the season and external conditions any influence in determining the quality of the plumage? I have several times asked this question, and the answer has invariably been that such properties as the colour and markings of feathers must necessarily be inherent, but whether external conditions have any effect on the development of these properties no one cared to express an opinion. But I am strongly of opinion that they have; and for this reason. Sometimes a bird will be checked during the moult. The growth of new feathers will temporarily cease,



and when it commences again, the new feathers will be of a different character to those which grew a few weeks previously. In a Partridge Wyandotte I have known the moult commence with the production of a beautiful clear pencilling and end in such an unsatisfactory manner as to render the bird useless for showing, whilst on some occasions the bird has begun badly and improved greatly at the second attempt. Moreover, the colour as well as the pencilling has shown a marked difference, and I have seen in Buff Orpingtons birds that have moulted two distinct shades of colour. This effectually disposes of the fatalistic theory that, no matter what may happen, the pre-ordained colour and marking are bound to develop. On the other hand, it shows very clearly that moulting depends to a very great extent upon external conditions, since it is obvious that the different feathers produced by a bird that moults in instalments are due to the different conditions experienced.

Here, then, we are faced with a very difficult problem, worthy of scientific consideration. What are the conditions that conduce to the production of ideal colour and markings?—provided, of course, that a bird possesses the inherent ability to reproduce good plumage, for it is by no means contended that a really bad pullet can moult into



**THE INTERIOR OF MR. GEORGE'S MAMMOTH POULTRY HOUSE AT ORPINGTON, KENT.**

a good hen merely through the influence of external conditions. The quality, we know, must be inherent. But what are the conditions most favourable to its evolution? Most of us keep our birds shut up during the moulting season. It is essential, of course, to preserve the new feathers from the effects of sun and rain; but many a time I have noticed that a bird which has commenced to moult, when running out on the fields or in a pen, has shown excellent new feathers, and on a few occasions I have known, these birds, when picked up and shut up in a building, have hung in the moult and finished with less perfect feathers. Such cases suggest, at any rate, that a natural moult is better than a forced or artificial one. Many a

time I have shut up a bird in June to moult for a show in August, and I am more convinced every year that it is better to let the birds take their time and moult when the natural conditions are favourable. Close confinement in warm buildings and reduced rations evidently do not produce the condition essential for good moulting, and a wet, chilly summer is likewise unfavourable, because it has a tendency to lengthen the duration of the moulting period, and in a long drawn-out, gradual moult there is time for changing conditions to produce varied types of feathers. The best hen I ever moulted dropped all her old feathers in a few days, and as the new crop grew, the markings and colour showed perfect regularity from head to tail. Such a moult doubtless entails a more severe strain upon the constitution, but one can cope with that by judicious feeding, and to an exhibitor the point of primary importance is the quality of the feathers produced. Some of the preconceived notions that exist regarding moulting need careful revision. In the case of a forced moult, for instance, the reduction of the food supply is undoubtedly a somewhat risky proceeding, for this reason. Forced moults are generally gradual, or, at any rate, they begin slowly, and the first young feathers are growing before half the old ones have dropped. Consequently, if you continue the reduced rations you seriously weaken the bird and run the risk of getting inferior feathers towards the end of the moult, whereas if you put it on full rations and stimulants you are liable to check the moult altogether. Hens are generally put on to half rations to check laying and induce an early moult, but every poultry-keeper knows very well that some hens continue laying whilst deep in moult, and I have had Partridge Wyandottes that moulted really well and laid regularly whilst the new plumage was developing. To do this a hen must be in sound, vigorous condition, and evidently that condition is more favourable for moulting than the sadly impaired vitality which we induce by shutting hens up and knocking off half their food. On the other hand, it is true that a soft, fat condition is undesirable, so the happy medium appears to be the hard condition in which we usually find an active laying hen that has had the benefits of an unlimited run and judicious feeding.

A natural moult is undoubtedly preferable, as the birds recover quicker and easier and so far as I have been able to ascertain, they produce a better quality of plumage. There are, however, seasons, such as that of 1909, when the weather is so unfavourable that artificial means often have to be resorted to to induce birds to moult before the cold weather of autumn sets in. A warm August is therefore particularly valuable in helping fanciers to get their stock started naturally into moult, for with such a commencement it is generally possible to get the process completed with comparative ease and in reasonable time.



# POULTRY INSTRUCTION AND ORGANISATION.

CONDUCTED BY EDWARD BROWN, F.L.S.

## SELECTIONS AND REVIEWS.

### In Which Direction?

The point of view is everything. Those who are impressed by the possibilities of what may be termed factory methods of poultry-keeping often lose sight of the limitations, whereas on the other hand we sometimes forget that these help to grade up farmers to a higher stage of production. That each has a place is evident. At the same time, as *Farm Poultry* points out:

Any general large increase of our poultry products must come through an increase of the production on farms and an increase of the number of town people keeping small flocks for their own use. Poultry-keeping under these conditions is a very simple thing. A little better attention to the small flocks on the farms and in towns would make a very great difference in the quantities of eggs and poultry produced in this country. If it were possible to induce even half of the farmers of the country to pay just ordinary good attention to their flocks, endeavouring to get as good production as could be obtained without departing from familiar methods, the increase of eggs and poultry within a year would be enormous. It has never been found possible to make so large a proportion of producers move simultaneously for bigger results, but still some very rapid increases in production have taken place. Apparently this came as a result of greater interest and better attention, but perhaps also because of a succession of years with favourable weather conditions. It often happens that people begin to give the poultry better attention when from other reasons the poultry have done better than usual.

### A Motor-Cycle Egg Carrier.

In *Feathered World* is given descriptions of what appears to be an excellent device for combining modern inventions with safety of transit, as follows:

The details given below by Mr. R. Turner, of Rochdale, of the means by which he carries 5,000 eggs a week, and saves both time and money, will doubtless interest readers. Mr. Turner can carry about a thousand eggs in the carrier, and has covered about 3,000 miles with the outfit. A  $3\frac{1}{2}$ -h.p. motor-cycle would cost £50 to £60 new, while a side-car would cost perhaps another £10 or so. Reliable second-hand motor-bicycles, however, can be purchased at prices ranging from £20 to £40, according to age, and side-cars at a proportionate reduction. The body would, of course, have to be specially made. Mr. Turner gives the following details of his outfit:

"As no doubt you are aware, I had a pony and trap. This I found very useful, until one day the idea struck me that there were means by which I could save both time and expense. Having arranged with a local agent to give me a trial run, I was quick to realise that not only could I save time and expense, but much unnecessary work. Being thus satisfied, my next problem was, What machine would suit my purpose? I finally

decided on a  $3\frac{1}{2}$ -h.p. (three-speed Armstrong gear) Ariel and side-car combination.

"After taking the body from the chassis I had a box made sufficiently large to carry three thirty-dozen cases of eggs. This I found caused some trouble, as breakages were too common, so I set about to make it more useful, and after much experiment I am proud to state that it is now perfect. In fact, I travel on any ordinary road at a speed well up to the legal limit without a breakage. The case is simply a chest of drawers made in such manner that no space is allowed in which the drawers can move by the jolting. The eggs are then placed in the fixtures, with a layer of felt at the bottom, and a cloth cover over the top, thereby making the whole thing rigid. Below I give you comparisons:

"Food for pony, per week, 10s. 6d.; depreciation and running repairs, 2s. 6d.; extra wages for labour, 6s.—total, 19s. Cost of running 50 miles per week, spirit and oil, 1s. 9d.; depreciation, 4s.; running repairs, 1s. 6d.; insurance and revenue, 2s.—total, 9s. 3d.

"In conclusion, I can honestly say that the machine has far surpassed my expectations, having covered close on 3,000 miles without the slightest trouble. Should any of your readers be on the look-out for a reliable mount, I can with confidence recommend the Ariel. Should any of your readers have difficulty in getting a similar side-box I shall only be too pleased to either supply them with same, or I will forward dimensions to suit their requirements."

### The Fruits of Organisation.

The following extracts from a letter written to Welsh papers by Colonel the Hon. R. S. Cotton, to whose inception and energies the success of the Anglesey Egg Collecting Depot are due, show what can be accomplished by combined effort, as well as the great opportunity for development on similar lines. It may be noted that Anglesey and Carnarvon are both in North Wales:

I should like to point out that it is not generally known that the reason why wholesale dealers do not care to handle British eggs is because neither the quality nor the supply can be relied upon. It is, unfortunately, only too true that the wholesale dealers of this country have very good reasons to complain, and this must always be the case as long as British eggs are placed on the market in the same haphazard way as so often is the case at the present time. But this would not be the case if our eggs were put on the market in the same way as foreign eggs appear, properly tested and graded. Under these conditions the dealer would be only too glad to handle them. As Mr. Jones Davies very properly pointed out, this is purely a question of organisation. At the present time over 53 per cent. of imported eggs to this country come from Russia, and therefore before they reach the dealers they are from twenty to forty days old, and in some cases even older. Yet they find their market, because they are all standardised before leaving Russia, and the buyer in England knows very well the quality of what he is buying.



The production of eggs is now a paying proposition, particularly so in the districts where egg-collecting depots have been established. The price of eggs in Anglesey, which is fixed by the depot, is this week fifteen for 1s.; the price at Pwllheli, where the price is fixed by the dealer, is twenty for 1s. Comment seems unnecessary. It is time for the producers to wake up to the necessity of organising and of forming collecting depots throughout the country, and this applies to Wales even more than it does to England. With a capital of £500 an egg-collecting depot capable of handling 50,000 eggs weekly can be successfully run. The foreigner cannot compete against our fresh eggs, and the demand is unlimited. In conclusion, may I say that the whole organisation and experience of the Anglesey Egg-Collecting Depot, Ltd., is at the service of any person desirous of forming similar societies on co-operative lines, and it is willing to give a month's training to managers at a nominal fee?

#### Resting Time for Hens.

We cannot force Nature beyond a given point without overstraining the system. That is why resting periods recur. Hens demand such seasons of relief. The greater the productivity the more pronounced is the need. Such is within the experience of every poultry-keeper. And, moreover, it pays to encourage seasonal rests. A writer in the *Homestead* says:—

It can hardly be expected that any fowl, no matter how well fed or housed, will continue to produce eggs day after day and month after month; but this seems to be the opinion of at least a few poultry-keepers, who, not satisfied with certain pullets laying upwards of two hundred eggs per annum, are aiming at still higher figures. We do not think this will ever do the fancy as a whole any good. It may cause astonishment in certain quarters and set up a good demand for stock and eggs, but it seems very doubtful whether such birds will be able to produce specimens strong enough to emulate their own feats. Broodiness in heavy breeds is a resting period, and during this time the egg organs benefit considerably. We do not wish to imply that all heavy varieties, immediately they show any desire to go broody, should be allowed to please themselves. This would not be profitable, but when they have been broken off three or four times, and have produced a very large number of eggs, then a good rest, either on eggs for hatching or simply on the bare nest, will do them a lot of good. When eggs are fairly high in price it is the wisest course for all poultry fanciers to break off their broodiness and get them laying again at the earliest moment; but now, when prices are low, it will not be lost money to let them sit three weeks on dummy eggs if no chicks are required. During the month of August eggs will rise considerably in price. Those who allow their hens to go broody now will find that by so doing they encourage egg production just at a time when the prices are rising rapidly. Non-sitters, which are supposed to lay in summer and do little in winter, should still be doing well. Some of them will doubtless take an occasional rest, but every spring hundreds of pullets simply lay themselves to death, so the wise poultry-keeper must not clamour too much for interest and lose the principal. It does not

matter how well the birds are fed and housed, after three months' heavy laying there has to be a resting period, and this is generally taken in the month of June.

#### Chickens and their Mother.

Writing in the *Daily Mail*, Mrs. Stephenson, of Southport, records an attachment of two chickens to the hen that hatched them, which raises many questions and deserves consideration. Whatever breeders may think as to which is the mother, the hen that lays the egg or the one that incubates it, evidently these chicks had no doubt whatever. The incident is thus described:

It so happened that two marked eggs were given to a hen that had been sitting three days. When her brood of chickens was hatched, naturally these two were not ready, so we gave them to another hen whose chickens were due in about a week. In due course the two chickens broke from their shells, and we gave them to the first mother, who received them kindly, the little party appearing to be all one family.

The next morning, however, the two new chickens were lost, and after much hunting were found under the wings of the hen that had hatched them.

We again took them away, and they joined the first group. The next morning one of them was found again with the sitting hen, and each day until the hatching of the second brood the comedy was re-enacted. Can students of psychology account for this?

#### Environmental Influences—and Management.

It has never yet been determined what are the limitations of heredity, but we know these can be increased by unfavourable conditions and false systems of management. All the predisposition in the world will be unavailing unless the opportunities are forthcoming. A writer in the *Bazaar* suggests that:

So much attention has been paid to the subject of breeding for egg-production that its importance has been exaggerated among inexperienced people to such an extent, that many appear to have formed the impression that the trait of productiveness can be bred into a strains so that the hens will lay, no matter under what conditions they may be kept. This erroneous idea explains why many beginners who buy stock from heavy-laying strains find them comparatively poor producers, the reason being that the condition under which the birds are kept are not favourable for egg-production. Therefore, although productiveness is to a very large extent an hereditary trait, it is always dependent upon local conditions, so that it may be considered an acquired trait as well—acquired through favourable feeding, housing, and management. For example, a beginner who sought our advice some time ago possessed a dozen White Leghorn pullets of a famous laying strain, and of unquestionably good laying type, though their performances were so moderate that their descent from prolific parent stock might have been questioned. The cause of their failure, however, was obvious, for they were kept in a bare earth run, with no opportunities for scratching, and even without such necessities as green food and meat. We advised the owner as to their management, but a little later he sold them, and re-



cently we heard that these same pullets, under proper care, have been yielding remarkably good results, one pullet having laid thirty-five eggs in as many days.

#### Gloonach in Goslings.

A writer in the *Weekly Freeman*, of Dublin, deals with a disease in goslings which is very common in a hot, dry summer, and gives it the above name, which we have never heard before—evidently an Irish term. Unfortunately the affection described is not limited in any way. Some years ago we found heavy loss arising in Yorkshire from the same cause. It is here stated:

This disease, which has no scientific name, is the cause of heavy loss to geese-owners all over the country. The pervading belief is: 1. That it is due to poverty of the blood, brought about by poverty of feeding in the first six weeks of their lives—i.e., either by

The first symptoms of gloonach is slight lameness, with desire to lie down and trail off from the flock when they are moving about.

Begin treatment at once. Put the goslings into a shed with an even floor littered with dry peat mould. Don't allow them to get into water for swimming. Feed them plentifully on oats steeped in water and mashies of nutritious meals. If Indian is used, it should be in small quantities mixed with other meals, as it is too heating. Be sure to supply pure drinking water, with plenty of small grit in it. Lime is badly wanted; old mortar broken up is good; also charcoal and sulphur. A bucket of ashes from wood or coal, with old mortar thrown into a corner of the shed, is a sanitary help.

Let all geese-keepers remember that lameness in goslings is a sign that they are being starved. They suffer



ONE OF THE ELECTRICALLY FITTED BROODERS ON MR. MEECH'S FARM AT POOLE, DORSET. (See page 532.)

insufficient feeding or wrong feeding. 2. That a predisposing cause of this condition is in-breeding, which means using ganders and geese of the same family for mating season after season, getting in no fresh blood. 3. The use of immature stock; mating birds that are too young, and so have not the stamina of parents in their third and fourth years. Geese are not mature till then, and they live to a greater age, and are stock-getters long after other farmyard fowl are useless. 4. A dry, droughty summer is another sure cause of outbreak; the grass is so burnt up that there is no nutriment in it; it is devoid of sap, and so unsuitable for feeding young geese. 5. Land that is more suitable for littance than for grazing is another cause—any poor, very dry soil, in fact. On such soils careful hand feeding is necessary in young goslings.

intense pain if they are not put up and provided with proper food, drink, and grit. Where the legs are hot and sore, as well as swollen, they might be treated as for rheumatism in other fowl. Steep the limbs in warm water, and, when dried, apply a little turpentine or any well-known embrocation, leaving it to soak in. We hope that this full note will be the means of saving many young flocks through the country, and we would be glad to hear later on, if our readers have found the treatment we recommend effectual.

#### "All-My-Eye" Methods.

If everything went right all the time; if there were no disappointments and no drawbacks; if the entire operations proceeded smoothly and in accordance with



his anticipations; if the sun shone, the rain fell, and the winds blew, just in accordance with his desires; and if hens laid, chicks hatched and grew as we wished, then the poultryman's lot would be smoother. Whether he would be more successful is another question. A writer in the *Smallholder*, on "Summer Worries," thus expresses himself:

In poultry-farming there is practically no routine work. That may seem a bold thing to say, but it is nevertheless a true thing.

When you get a long dry spell you may reckon that you will have to keep sweeping your pens with a besom pretty regularly. Whether you get a wet spell or a dry one, you may reckon that the droppings-boards of all your poultry-houses must be cleaned daily—and, furthermore, must be cleaned early in the day.

It takes a day's sunshine or a day's cool wind to sweeten a house that has been very heavily stocked through the night. If you leave the droppings-boards unswept and your houses ungarnished until late in the day your pocket suffers. Your best stock goes wrong in the lungs, and wrong in the liver; and you go wrong in the £ s. d.

But this is practically all that you do by rule of thumb. Many clever people who talk without thinking and write without thinking, and do not seem able ever to try to think *without* talking or writing, may have told you that you must make rules about watering. Four times a day to the tick of the clock you must go round with the water-can or the water-pail, or—if you be exceedingly modern and scientific in your methods—with the hose-pipe. Feeding, the same.

It is "all my eye and Betty Martin"; the most childish and absurd of fallacies at its root. System is well enough—an absolute necessity for all smallholders. It is the best of servants, but the worst of masters. System has killed as many chickens, we dare swear, as it has saved.

There are a hundred responsibilities in poultry-farming where in ordinary farming there are only two. The loss of a pedigree hen is to the full as serious as the loss of a sheep. If the hen be the product of a mating that it has taken seven to ten years to accomplish, her loss may be of much more vital importance than that of an ordinary sheep.

#### Women's Influence on Scientific Research.

We need the help of everyone in working for progress, whether on practical or scientific lines. Mr. Oscar Smart, in *Eggs*, shows the relative virtues of each sex, from which we learn that the greater results will be arrived at by giving full opportunity to both:

It must be clear to anyone who has carefully followed our brief notes on Mendelism, that the work requires infinite patience, infinite concern for detail, and the most careful analysis of facts. Man is only moderately successful in this work; he is too anxious to "make haste quickly"; in trying to reach his goal by a "short cut" he often makes a mistake at the outset, which ruins the whole list of subsequent matings. He too often forgets that each generation must depend for its composition on the generation that has gone before; his testing is often not as thorough as it should be; a bird genetically unsuitable is allowed to pass, with the

result that his fowls never breed absolutely true to the special characteristics which he desires. This is seldom the case with woman, who is nothing if she is not thorough.

I do not wish to rate woman, even for politeness' sake, above man in the poultry industry; she has her part to play and he has his; merely as a matter of personal opinion I wish to define what I believe to be hers. In the large number of letters which I receive from our readers I have always noticed that whereas the masculine breeder wants to breed in his hundreds, if not in thousands, the ladies are willing to progress more slowly. Now if we are going to produce, say, one thousand chickens annually, we shall find it quite impossible to test all these individually; we shall have to "trust to luck" in selecting the birds we want, and "luck" in scientific breeding is about the very worst thing we can rely upon. One gentleman writes that he has so many incubators, each representing forty hens; he wants to know how to distinguish the chickens from each hen when they hatch. I have made suggestions which he may or may not follow; but, candidly, I cannot see the sense of going to the trouble and expense of trap-nesting so many hens, and producing pedigree chickens on such a large scale, if it is going to make it difficult to decide the parentage on the one hand, and all but impossible to test them all out on the other. I think it better to start pedigree breeding on a small scale, and when you have made your strain homozygous for the characters you require then breed on as large a scale as you wish. Once get a strain homozygous for any particular character and it will remain homozygous for that character; no more testing is necessary, while further trap-nesting becomes unimportant.

Women not only realise this, but they carry it into practice; they also contrive to evolve new ideas that render it easier and more certain in attempting scientific experiment.

#### The Royal and Other Shows.

If there is any virtue in utility races of poultry in connection with farming, we might reasonably expect that the great agricultural exhibitions such as the Royal would arrange their poultry sections on other than fancier lines. Such is not, however, the case. That does not stand alone, and the time has fully come when the whole question demands reconsideration on the part of the various show committees. Mr. W. M. Elkington, writing in *Feathered Life*, says:

I am tempted to revert to a matter I touched upon recently, for in the scheme of instruction we might reasonably expect the great agricultural societies to lend a hand. What sort of impression could a utility man be expected to carry away from the Royal Show last week? As a fancier I thoroughly enjoyed the show, or as much as the intense heat would permit, but had I been solely interested in utility matters I would have searched the show-yard without finding anything to interest me outside the trade stands. Now, my opinion is that the Council of the Royal Agricultural Society are waiting for a lead in this matter. I believe they are as progressive a lot of men as we could find in British agriculture, and it is for the leaders of the utilitarian movement to call their attention to the misleading effect



of representing only one section of the poultry industry at this great show. Have the Utility Poultry Club made any move in this matter? And, if not, will the club consider the desirability of laying before the Council of the R.A.S.E. the importance of differentiating between the fancy and the utility classes of poultry for the benefit of numerous farmers and others who are more likely to be interested in the utility than the fancy side? As I have pointed out before, competitive classes for utility stock are of questionable value, and what we need most of all, or, at any rate, first of all, is a demonstration designed to make it obvious to every visitor that the commercial poultry-keeper must keep a class of stock that has been bred for the sole purpose of economical production. The time is ripe for organising such a display, and I believe the Utility Poultry Club would greatly enhance its popularity by

stood that a deputation waited upon the Minister of Agriculture in Sydney with the view of securing a reduction of the weights, as fixed by the Poultry Expert, for the Leghorns. For Leghorns and Minorcas the weight required is  $3\frac{1}{2}$  lb. on the day of entry, and it is about half a pound too much for several of the competitors, who have been obliged to drop out. Wyandottes and Langshans must pull 4 lb. and Orpingtons  $4\frac{1}{2}$  lb. The Leghorns are egg-layers pure and simple, and they have been so selected and cultivated that all useless gear has been knocked off them. The big head and big floppy comb have been replaced by a small, neat head and small comb. The big, coarse legs have made way for smaller and neater shanks. The feathers are not so thick and wide as those worn by the old-timers, but they lie closer, and the modern layer has less flesh.



ANOTHER VIEW OF THE ELECTRICALLY FITTED BROODERS ON MR. MEECH'S FARM. (See page 532.)

taking the matter up and remedying what every practical utilitarian and the majority of fair-minded fanciers as well regard as an unfortunate anomaly.

#### Weight Standards in Laying Competitions.

That the more prolific hens are usually small in size of body is unquestionable. That, however, reduction of size has its limitations is equally true. There always seems a tendency to extremes, and some competitors are certainly going too far. The whole question demands consideration. At Hawkesbury, New South Wales, a weight standard has been imposed respecting which a writer in the *Adelaide Saturday Journal* says:

The accepted nominators for the competition, which will begin on April 1 at Hawkesbury, were recently advised that the promoters have fixed a weight limit for each breed at time of entry, and that any bird which fails to pull the weight laid down for it will be rejected.

This intimation has caused a commotion among the competitors, and, from information to hand, it is under-

In a few words, careful selection and cultivation have eliminated all unnecessary gear and fixings. I mean unnecessary as regards the laying aspect. And, with it all, the modern layer has dropped about 2 lb. to 3 lb. in weight, and pulls from 3 lb. to 5 lb., as against the 4 lb. to 7 lb. of the old-fashioned Leghorns. At the same time, the egg-laying records have gone up amazingly. Ten years ago the hen that could drop 150 eggs in twelve months was rated very highly; to-day no breeder would have such a bird on his mind. Why, nowadays a flock of Leghorns is expected to average 200 eggs in the year (and have done it, too, in officially controlled tests), and individual specimens that lay from 250 to 270 eggs in twelve months are common.

Now that the moulting season has "opened," it is advisable to reduce the rations of the birds and change their diet. Put into the sheds the best of the breeders and the hens which are being held over for winter laying. This confinement—it must be done in a proper manner—is better than giving the flock complete liberty. However, there must not be any coddling.—*Poultry*.



## CURRENT POULTRY LITERATURE.

(Mention is here made of special articles appearing in home and foreign publications dealing with poultry-keeping in its various branches.)

JOURNAL OF THE BOARD OF AGRICULTURE. London : 4, Whitehall Place.

Poultry-Keeping on a Small Holding, by J. H. Scott, July, 1914, *illustrated*.

AGRICULTURAL GAZETTE. London : Bream's Buildings, E.C.

Selecting the Breeding Stock, by E. C. Davies, July 13, 1914.

The Green Gosling, by A. T. Johnson, July 27, 1914.

THE BRITISH REVIEW. London : Williams and Norgate.

Sport v. Industry in Rural Affairs, by W. H. G. Ewart, June, 1914.

BAZAAR, EXCHANGE AND MART.

Care of Moulting Poultry, by E. T. B., July 22, 1914.

Egg-Production as an Acquired Trait, by E., June 26, 1914.

Starting a Poultry Farm, by J. S. Hicks, July 3, 1914 (*con.*).

CO-OPERATION IN AGRICULTURE. London : Queen Anne's Chambers, S.W.

Possibilities in Egg Production, by Various, July-August, 1914.

EGGS. Poole : Randolph Meech.

Chicken Feeding, by the Editor, July 1, 1914.

Heredity and Environment, by Oscar Smart, July 8, 1914.

The Production of Lean Birds, by W. Reynolds, July 15, 1914, *et. seq.*

FARM AND HOME. London : 63, Lincoln's Inn Fields.

Goslings and Their Management, by E. T. Brown, June 24, 1914.

How to Caponise, by E. T. Brown, July 1, 1914.

Co-operative Poultry Farming, by J. G. E., July 15, 1914, *illustrated*.

FARMER AND STOCKBREEDER. London : Essex Street, W.C.

Chicken Losses—Overcrowding, by G. A. Palmer, July 6, 1914.

Coccidiosis in Poultry, by "Vet," July 6, 1914.

Chicken Pox, by H. Leeney, M.R.C.V.S., July 13, 1914.

FEATHERED LIFE. London : 5, Fetter Lane, E.C.

Summer Cramp in Feathered Stock, by A. Dinsley, July 1, 1914.

Preparing for Winter Egg-Production, by J. H. Mudd, July 8, 1914.

Eggs : Their Size, Quality, and Value, July 22, 1914.

FEATHERED WORLD. London : 9, Arundel Street, W.C.

Up-to-date Mothering, by Mary M. Reamsbotton, July 3, 1914, *illustrated*.

A Motor-Cycle Egg Carrier, July 3, 1914, *illustrated*.

White Leghorns and White Diarrhoea, by "Right-about," July 10, 1914.

The Radius of Supply, by Edward Brain, F.L.S., July 17, 1914.

Observations on Game Fowls, by Various, July 24, 1914.

NEWCASTLE DAILY CHRONICLE. Newcastle-on-Tyne : Westgate Road.

Rising Prices and Larger Profits, by Edward Brown, F.L.S., July 11, 1914.

POULTRY. London : 10, Essex Street, E.C.

Carpentry Made Easy for the Poultry-keeper, by A. C. Horth, June 26, 1914, *illustrated (con.)*.

Choosing the Location for a Poultry Farm, by F. A. H., July 24, 1914.

Scratching-Shed System of Housing Poultry, July 24, 1914, *illustrated*.

POULTRY WORLD. London : 154, Fleet Street, E.C.

Should Intensively-Kept Hens be Bred From? by Various, July 17, 1914.

The La Bresse as an All-Round Fowl, by Mrs. M. Reamsbotton, July 24, 1914.

THE SMALLHOLDER. London : Henrietta Street, W.C.

Cater for the Holiday Trade, by E. T. Brown, June 27, 1914.

Summer Worries in the Poultry Run, July 4, 1914.

The Turkey Poult, by A. T. Skey, July 11, 1914, *illustrated*.

Demonstration or Experiment, by E. T. Brown, July 11, 1914, *illustrated*.

THE STAR. London : Bouverie Street, E.C.

Fowl Farming for Health, June 18, 1914, *illustrated*.

THE TIMES. London : Printing House Square, E.C.

Influence (of Spain) Upon European Breeds, June 29, 1914.

WEEKLY DISPATCH. London : Carmelite House, E.C.

Dutch Methods of Duck Breeding, July 5, 1914.

THE WEEKLY FREEMAN. Dublin : Sackville Street.

Gloosnach in Goslings, July 4, 1914.

YORKSHIRE OBSERVER. Bradford.

Poultry-Keepers' Problems, July 24 1914.

CANADIAN POULTRY REVIEW. Toronto : 184, Adelaide Street West.

How to tell the Age of Hens and Pigeons, by Victor Fortier, July, 1914, *illustrated*.

Mineral Elements in Poultry Feeding, by M. A. Jull, July, 1914.



A BLUE ORPINGTON COCKEREL.

NEW ZEALAND POULTRY JOURNAL. Christchurch, N.Z.

Poultry Culture in New Zealand, by the Editor, May, 1914.

Shall the Size of the Leghorn be Increased? May, 1914.

CHASSE ET PECHE. Brussels : 5 and 7, Rue du Marteau.

Avian and Human Diphtheria, June 20, 1914.

Le Marquage des Œufs, July 25, 1914.

UNION AVICOLE. Liege, Belgium : 31, Rue Soverain-Pont.

Le Marquage des Œufs, July 19, 1914.

FARM POULTRY. Boston, Mass., U.S.A. : 232, Summer Street.

The American Idea in Poultry Culture, July, 1914.

RELIABLE POULTRY JOURNAL. Quincy, Ill., U.S.A.

The Campine, by F. L. Sewell, June, 1914, *illustrated*.

A Living From Poultry, by A. F. Hunter, June, 1914.

Influence of Feather on Standard Shape, by F. L. Sewell, July, 1914, *illustrated*.



## BOOKS AND PUBLICATIONS RECEIVED.

AGRICULTURAL ORGANISATION : ITS RISE, PRINCIPLES, AND PRACTICE ABROAD AND AT HOME. By Edwin A. Pratt. London : P. S. King and Son. 163pp. 1s. net.

This is a cheap and somewhat enlarged edition of a work published some time ago under the same title. Mr. Pratt's writings have done much to make known the necessity for and the lines upon which organisation of agriculture should take, and has marshalled his facts with considerable skill. The hub of the whole is Chapter V., designated "Evolution of the A.O.S.," in whose interests it has evidently been compiled. What might have been made clearer is that in several of the foreign countries, instead of massing all organisation under one society, each subject is separately dealt with on the *ad hoc* principle.

A CONTINUED STUDY OF CONSTITUTIONAL VIGOUR IN POULTRY. By C. A. Rogers. Bulletin No. 345 of the Department of Poultry Husbandry, Cornell University, Ithaca, N.Y. 18pp., *illustrated*.

Contains a record of third year observations in continuance of those recorded in Bulletin No. 318. The results, with variations to be afterwards noted, confirm those obtained before, and are summarised thus : "In selecting for breeding stock to produce a large number of chickens and capable pullets the first essential is to select according to strength, with the expectation that hens so selected will usually be the most productive."

EXPERIMENT STATION RECORD. Washington, U.S.A. : Department of Agriculture. Vol. XXX., No. 7, May, 1914. No. 8, June, 1914.

AGRICULTURAL JOURNAL OF THE UNION OF SOUTH AFRICA. Pretoria, S.A. : Vol. VII., No. 6, June, 1914.

# PRICES OF EGGS AND POULTRY.

From "Return of Market Prices" issued by Boards of Agriculture for England and Scotland.

EGGS—HOME PRODUCE.				
	WEEK ENDING			
	June 24.	July 1.	July 8.	July 15.
	per doz.	per doz.	per doz.	per doz.
London .....	1/0 to 1/1	1/0 to 1/1	1/0 to 1/1	1/0 to 1/1
Bristol .....	1/0	1/0	1/0	1/0
Carlisle .....	1/1	1/1	1/0	1/0
Denbigh .....	1/1 to 1/0	1/0	1/1	1/0
Derby .....	1/0½, 1/1½	1/0½ to 1/1½	1/1 .. 1/2	1/1 to 1/2
Dorchester ..	1/0½	1/0	1/0	1/0½
Hull .....	1/0	1/0	1/0	1/0
Ipswich.....	1/0½ to 1/0	1/0½ to 1/0	1/0½ to 1/0	1/0 to 1/2
Lincoln .....	1/1	1/1	1/1	1/1
Newport (M)	1/1½	1/0	1/0	1/0
Norwich ...	1/0	1/0	1/1	1/2
Penzance ...	1/9½ to 1/0	1/9½ to 1/0	1/1½ to 1/0	1/1 to 1/0
Ruthin .....	1/0 .. 1/0½	1/0	1/0	1/0 .. 1/1
Shrewsbury	1/1 .. 1/0	1/0 to 1/1	1/0 .. 1/1	1/1 .. 1/0
Wolverh'ton	1/0 .. 1/1	1/0 to 1/1	1/1 .. 1/2½	1/0 .. 1/1
York .....	1/1	1/0	1/2½	1/2½
Glasgow ...	1/1 to 1/2	1/1 to 1/2	1/1 to 1/2	1/1 to 1/2
	per 120.	per 120.	per 120.	per 120.
Irish (L'don)	9/6 to 10/0	9/6 to 10/0	8/6 to 9/6	8/9 .. 9/3

POULTRY—FOWLS.				
	WEEK ENDING			
	June 24.	July 1.	July 8.	July 15.
London .....	3/0 to 4/0	3/0 to 4/0	3/0 to 4/6	3/0 .. 4/0
Birmingham	2/6 .. 3/3	2/6 .. 3/6	2/6 .. 3/0	2/6 .. 3/0
Bristol ... ..	2/6 .. 3/6	2/6 .. 3/6	2/6 .. 3/6	2/6 .. 3/6
Derby .....	2/6 .. 3/4	2/4 .. 3/2	2/2 .. 3/0	2/0 .. 3/0
Hereford ...	3/0 .. 3/3	3/0 .. 3/6	3/0 .. 3/6	3/0 .. 3/6
Ipswich .....	3/0 .. 3/6	3/0 .. 3/6	3/0 .. 3/6	2/9 .. 3/3
Lincoln .....	2/6 .. 3/6	2/6 .. 3/6	2/6 .. 3/6	2/6 .. 3/6
Newport (M.)	3/3 .. 4/0	3/3 .. 3/9	3/3 .. 3/9	3/0 .. 3/6
Norwich.....	2/9 .. 3/2	2/6 .. 3/4	2/9 .. 3/6	2/9 .. 3/6
Penzance ...	3/6 .. 3/9	2/9 .. 3/0	2/3 .. 2/9	2/9 .. 3/0
Shrewsbury..	2/9 .. 3/6	3/0 .. 3/9	2/6 .. 3/0	2/6 .. 3/3
York .....	3/0 .. 3/6	3/0 .. 3/0	2/9 .. 3/6	2/9 .. 3/6

DUCKS.				
	WEEK ENDING			
	June 24.	July 1.	July 8.	July 15.
London .....	2/3 to 3/6	2/3 to 3/6	2/3 .. 3/6	2/0 .. 3/0
Birmingham	3/0 .. 3/6	2/6 .. 3/6	2/6 .. 3/0	2/6 .. 3/0
Bristol .....	2/6 .. 3/6	2/6 .. 3/6	2/6 .. 3/6	2/6 .. 3/6

REPORTS AS TO LONDON MARKETS WERE AS FOLLOWS				
	WEEK ENDING			
	June 24.	July 1.	July 8.	July 15.
	each	each	each	each
Sur'v Chicks	4/6 to 6/6	3/6 .. 6/0	3/6 .. 6/0	3/6 .. 6/0
Fatted Irish..	4/0 .. 5/0	3/6 .. 4/6	3/0 .. 4/0	3/0 .. 4/0
Irish .....	2/9 .. 3/3	1/9 .. 2/6	1/9 .. 3/6	1/9 .. 3/3
Lincolnshire.	3/0 .. 3/9	2/0 .. 3/9	1/9 .. 4/0	1/9 .. 3/9
Ducklings ...	5/0 .. 7/6	4/6 .. 7/6	3/0 .. 6/6	3/0 .. 6/6
	per lb.	per lb.	per lb.	per lb.
Russians.....	7 .. 11	7 .. 11	7 .. 11	8 .. 10

EGGS—FOREIGN (London).				
	WEEK ENDING			
	June 24.	July 1.	July 8.	July 15.
	per 120.	per 120.	per 120.	per 120.
French .....	9/9 to 11/0	9/9 to 11/0	8/6 to 10/6	8/6 to 10/6
Danish .....	9/6 .. 10/9	9/3 .. 10/6	8/6 .. 10/0	8/6 .. 10/0
Russian.....	6/0 .. 8/0	6/3 .. 7/9	6/3 .. 7/9	6/3 .. 7/9
Austrian ...	7/0 .. 8/6	7/0 to 8/3	7/0 .. 8/0	6/6 .. 8/0



## FANCY MATTERS.

By "EXHIBITOR FOR TWENTY-SEVEN YEARS."

### THE POULTRY CLUB'S BONUS SCHEME.

THE official announcement of the Poultry Club's new scheme, which is a democratic measure conceived in the interests of the "rank and file," gives one furiously to think. The hon. secretary reported to the Council that he had circularised the whole of the members, but had been disappointed at the response. Only 207 cards had been returned! But those who had responded desired their benefits to go to some seventy affiliated societies and specialist clubs. These benefits would not be paid out until the end of the financial year. He trusted that members, in sending their subscriptions, would do so at once, and at the same time state which society (if any) should receive the benefit from their membership. Although he thought he had made it clear in the circular sent that this benefit was to be used as specials to be won only by those who had never won specials at the large shows, and were therefore in the nature of novice prizes, it really seemed, judging from the meagre response, that members had not grasped the fact that the Poultry Club was striving to do something for those who were not fortunate enough to win the cups, medals, and specials which had hitherto been offered. He was also of opinion that the secretaries of specialist clubs and societies affiliated to the Poultry Club should, in their own interests, explain the scheme and induce their members to take an interest in it. Several members thought that the scheme had not been understood, and suggested that it should be given wider publicity.

#### THE INDIFFERENCE OF FANCIERS.

What exactly is the Poultry Club's bonus scheme? is a question that is being repeatedly asked. The answer has been supplied in an exhaustive and able communication which Mr. P. H. Bayliss (the introducer of the scheme) has sent to the Press. As Mr. Bayliss truly says, year by year one hears the cry: "Help the novice." When, therefore, the sub-committee appointed last year to report on the advisability of holding a Poultry Club show found that such an undertaking would entail a loss, they put forward an alternative scheme with a view to benefit the general members. Mr. Bayliss consequently submitted to his colleagues on the sub-committee a scheme in three sections, which was fully considered by them and accepted as a basis upon which to work. That scheme was reported to the Council, who, after carefully discussing it, referred it back to the sub-committee for the purpose of ascertaining the probable cost. The secretaries of all specialist clubs and societies affiliated to the Club were at once communicated with and lists of their members requested. These obtained, the sub-committee compiled a list of Poultry Club members in each society and a list of fanciers who were members of one, two, or more affiliated societies. This somewhat laborious task accomplished, the sub-committee presented the figures to the Council with a further

report. The result was that Section 1 only was ratified; but since the Council was divided even on that point, Mr. Bayliss was advised to move it at the annual general meeting. This he did, and had the satisfaction of seeing it adopted.

#### AND ITS RESULT.

Whatever may be said against the Poultry Club, no one can accuse the sub-committee of not doing their utmost to evolve something that would benefit novices. And one would have imagined that the novice would have shown interest in the subject and have given the scheme his best support. But what has he done in the matter? Practically nothing. It has left him cold. The circular explanatory letter above referred to which the hon. secretary of the Club sent out was accompanied by the following postcard, the blanks in which each member was requested to fill in: "The Poultry Club Scheme.—I am a member of the following poultry societies..... I desire the..... club or society to receive benefit from my subscription to the Poultry Club according to the resolution passed at the general meeting. Signed..... Address, ....." And of the 1,600 cards despatched only 207 were returned, of which about ninety were from members who had not paid their subscriptions and were, therefore, not eligible! A response of about only twelve and a half per cent. Little wonder that Mr. Bayliss is led to remark: "How encouraging!" Is it apathy, or is it, as suggested by some, inability to understand the scheme; or is it contempt at the smallness of the amount to be returned in some cases? Whatever it is, it is to be hoped that those who wrote to Mr. Bayliss approving the scheme will now come forward and support him.

#### WHAT THE SCHEME MEANS.

Any specialist club or associated society having not less than five members who are also members of the Poultry Club may claim a rebate of 20 per cent., or 1s. per member, to be given as a special or specials to exhibitors at their respective annual open or members' show, to Poultry Club members who have never won a money prize at certain big shows. Only one club or society can claim the rebate for any individual member. And, as an example, Mr. Bayliss takes the White Wyandotte Club. Of its 160 members ninety are members of the Poultry Club. If the secretary of the White Wyandotte Club could induce the whole of the ninety to nominate that club to receive the rebate, that would mean £4 10s. to be divided among the novices at the club show. There is absolutely nothing wrong with the scheme. It is one of the most democratic and most beneficial projects that the club has evolved. But to have the result that its promoters hope, and deserve, to see, it must be widely advertised.

#### DEATH OF MR. JOHN HORN.

Since the death of his life-long friend, Mr. Harry Wallis, the demise of no fancier has caused such widespread regret as that of Mr. John Horn. Quiet and unostentatious, yet Mr. Horn accomplished untold good for the cause of fancy poultry. That he shared



with the late Mr. William Cook the honour of bringing the Black Orpington before the public is indisputable. He was the friend, confidant, and adviser of the great poultry-breeder. But he did not confine his efforts to the black variety solely. All members of the Orpington family found in him a sincere supporter and successful breeder and exhibitor, while he kept and penned many excellent Minorcas and Langshans. He was also one of the promoters of the East London Fanciers' Society, which was formed in 1887, and he was the first chairman of the Tower Hamlets Fanciers' Society. He was, moreover, president of the Variety Orpington Club, and his last public appearance was when he took the chair at its last annual meeting. Of the Poultry Club he was joint hon. secretary (with Mr. Harry Wallis) from July 5, 1891, on the sudden death of Colonel Ridgway, to the September annual meeting. He was also for some time treasurer of the club, on many special committees of which he also acted. Early in 1913 Mr. Horn had a nervous breakdown, and from this he never properly recovered. He was born in 1857, and for many years held a responsible position in the banking house of Messrs. Glyn, Mills, Currie, and Co.

#### ANOTHER NEW BREED!

Verily, of new breeds and varieties there is no end. This time it is a territorial—at least, its cognomen is that of the county in which it has been "manufactured." It rejoices in the no less euphonious name of "The Black Worcester." And its breeder is Mr. Sadius Hancock, of Worcester. It is to be introduced to the public at a later date, since Mr. Hancock now makes the announcement of the breed's existence for the purpose of securing to it the name of the county in which it is being produced.

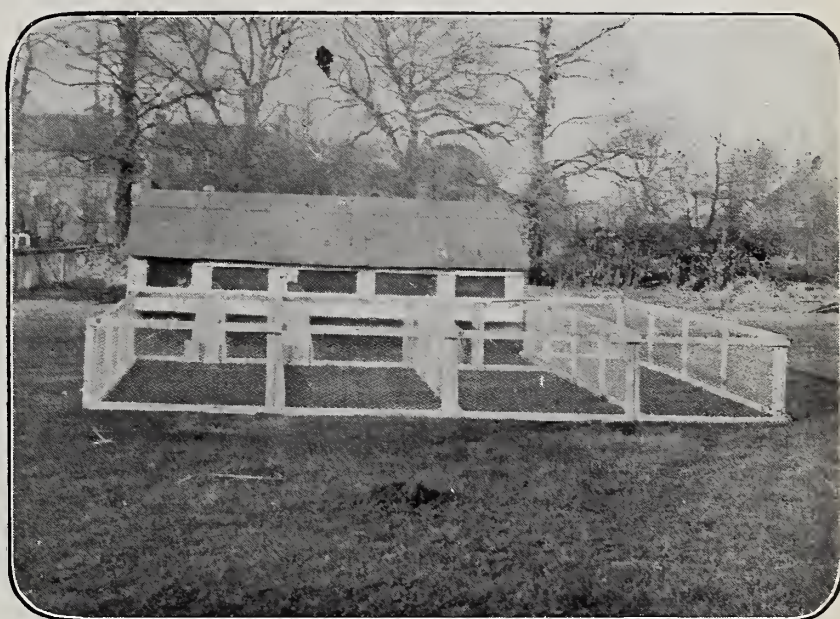
#### SOME RECENT SHOWS.

For the third time in its existence—extending over three-parts of a century—the Royal Agricultural Society's Show was held at Shrewsbury. The conditions of the recently-held event, however, differed in many respects from the two which preceded it—in 1845 and 1884. The show of 1845 was the seventh held by the Society, and the last to take place in a town without railway accommodation. In those days there was no railroad beyond Wolverhampton, and a number of omnibuses and coaches from London were engaged to cover the ground between Wolverhampton and Shrewsbury. No record exists regarding the "gate" at this early show, but the financial result was a deficit of £2,995. On the other hand, the second Shrewsbury Show (in 1884) was most successful in every way, and the pecuniary result was a profit of £2,301. No record is given of the poultry section in 1884, but at the recent event there was an entry of 1,373, not quite as numerous as at Bristol last year, but with that single exception, greater than on any previous occasion. The show all round was an excellent one; and as the classification is now quite up to date, there were many splendid exhibits on view from all the best yards in the country. Bantams are now included in the "Royal" schedule, and some 152 were shown in the sixteen classes provided for them.

Although the number of exhibits fell somewhat short of last year's total, the quality of the fowls on view at the seventy-second show of the Wirral and Birkenhead Agricultural Society's fixture was first-class. The diminution in the total entry was doubtless due to the fact that the event was held two months earlier than usual this year, and in consequence many old birds were in moult, while hosts of chickens were not ready for the show pen. However, these facts notwithstanding, there was a very successful display; and once again many fanciers made the exhibition an early summer rendezvous.

#### BUTTERCUPS.

The breed with the horticultural sobriquet continues to flourish. But there are rumours of dissension in its ranks, and some talk of the formation of a new club! However, now that the Buttercup has been admitted to the Poultry Club's Standards of Perfection, certain



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A USEFUL FORM OF A PORTABLE SECTIONAL BROODER.

differences of opinion may be smoothed over. In the meantime, the opinion of the members is to be ascertained, by postal ballot, as to whether the present standard—i.e., that printed in the Club's 1914 year-book and in the American Club's 1913 year-book—be adhered to, or whether the changes in the American Club's 1914 year-book issued in April, 1914, be adopted. The result will be awaited with much interest by a host of Buttercup fanciers.

#### DAMAGE TO SHOW BIRDS.

The apparently wilful damage of fowls while in transit to and from, or at, shows is becoming much too frequent. Unfortunately, three cases occurred at such a well-managed event as the Royal Counties, at Portsmouth. Mr. J. W. Walker, the well-known Langshan fancier, of Henley-on-Thames, had a Langshan cock returned from that event with four of its sickle feathers palpably cut off. The bird had only been in a show pen once previously—namely, at the Crystal Palace, where he was awarded the challenge cup. It has been ascertained that when the bird was judged he was in perfect condition. Mr. R. A. Blake-



borough, of Brighthouse, also reports that two black Wyandotte cocks that he sent to the same show were returned to him, although they were all right when they left their yard, showing signs of very rough treatment, both birds having their sickle feathers cut and broken. Nothing is more discouraging to the genuine fancier than to receive from a show fowls, upon which he has lavished so much thought and care, in a mutilated condition, and no punishment seems too severe for the perpetrator of such dastardly acts.

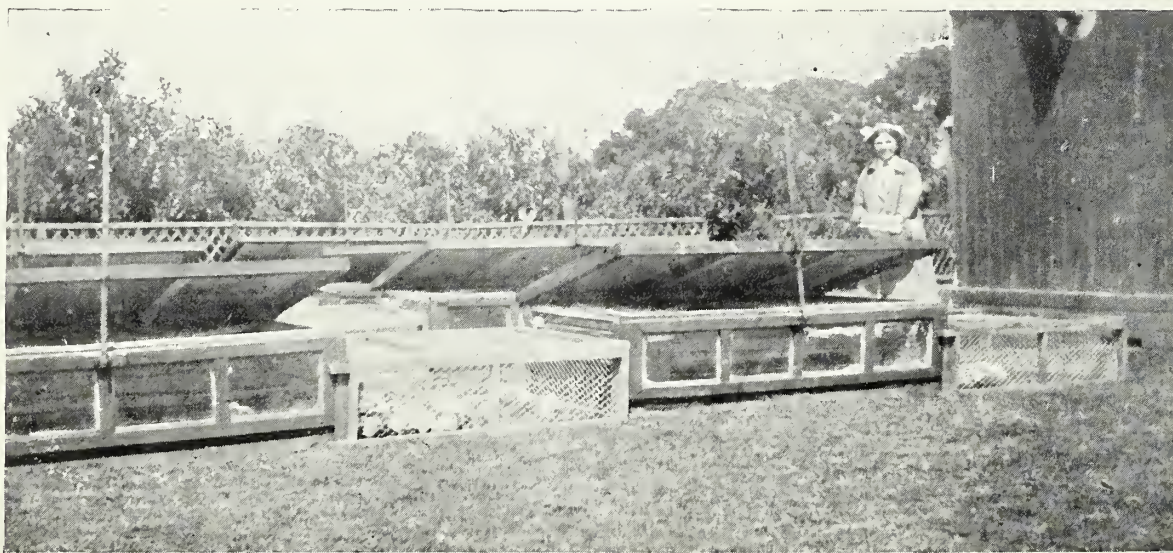
## THOSE ELECTRIC CHICKENS.

HOW far electricity can be applied to counteract the tendencies and meet the requirements of modern conditions no one can say. The possibilities are as great as the realisations are few. It is all in the experimental stage. May be this is a force that will alter the whole condition of affairs, giving so much vitality to life in its various forms that disease shall be conquered, the germs being destroyed by the electric current or waves. Or it may leave no more influence than has a telephone message passing along the wires overhead. For actual determination of these questions we must patiently wait, regarding them as

the present time is that the experiment is deeply interesting, with the hope that it may be continued on a larger scale and under other conditions, so that comparative records may be secured. That is the limit at present.

Briefly stated, the system is that by use of an induction coil, costing about £10, and large enough to electrify 500 chickens, waves of electricity are passed through the atmosphere and the bodies of the chickens, although they are unconscious of the fact. Even when sparks can be made to fly from their beaks and wings they are not adversely affected. Probably we are all electrically affected every moment of our lives, and, therefore, there is nothing novel in what is really a control of forces already present. The suggestion is that in this way waves pass through the ether. What the exact influence is upon the chicken's body is unknown. That has yet to be determined.

From the induction coil referred to, by connecting wires, which need not be more fully described, this current is conveyed to the brooders, in which are passed around the inner walls three insulated wires. For ten minutes every hour during the day the electricity is turned on; during which period it is supposed that energy is passing into the chicks, and they are receiving a stimulus highly beneficial to them, and



CHICKENS BEING REARED ELECTRICALLY AT POOLE, DORSET.

uncertain and even doubtful. They are not within the immediate horizon of the practical poultryman.

When Mr. T. Thorn Baker demonstrated the application of electricity to chicken-rearing, the first idea was that it was merely a sensation got up for advertising purposes; when the same gentleman read a paper a few months ago at the Society of Arts, it was realised that the question was of much wider application, as indicated by the influence exerted upon the germination and growth of radishes and tomatoes, and that it deserved careful study; and when we paid a visit recently to Poole, seeing the process in actual operation, the impression was further strengthened that even though, practically speaking, it may never be of much value, as no one save the operator on a larger scale and under intensive lines would attempt to apply such system, it may yet have results far beyond our ken. All that can, however, be said at

which is certainly more natural than stimulants generally are. It may yet be proved that the influence is purely stimulative, in which case the after effects, if the chicks are raised to adulthood, have to be determined.

The illustrations which are given herewith show the installation of individual brooders on Mr. Meech's place at Poole. In addition, a four-tiered flat has been used, and, it is claimed, with equal results. But, as stated above, it is all in the experimental stage as yet, and requires a much more exhaustive test ere a judgment of its use and practicability can be made.

It is claimed that by application of this system mortality in chicken-rearing has been reduced enormously. If that can be generally assured success is certain. This result may, however, in part be due to greater attention and to smaller flocks. What was



evident in the chickens inspected was that they were well forward for the age stated, that they were very bright and active, that they had feathered splendidly—a point in which artificially hatched and reared chicks fail; and that they showed every sign of

vigorous constitutions. The system is one that deserves further study, and we hope there are pioneers, both private individuals and public institutions, that may give it a test, and thus enlarge experience in what is a deeply interesting piece of research work.

## THE SMALLHOLDER'S FIRST YEAR.

### CHAPTER VIII.

#### TRAP-NESTS, FEED HOPPERS AND FITTINGS.

WHEN trap-nests were first introduced everything appeared to be in their favour, since the system seemed to be beautifully complete. No one doubted but that to breed from the best layers was the surest way of increasing egg-production; hence by discerning the most prolific members of a flock a high degree of fecundity was bound to follow.

It is necessary, however, to reconsider methods adopted in connection with poultry-keeping as with all other pursuits. It is not possible to determine the true value of a system until it has been subjected to a prolonged test by a large number of experimenters. It is frequently found that what seems helpful and useful at first proves in the long run to be lacking in the results anticipated. No one can be surprised, therefore, that the absolute reliability of trap-nests is being questioned as regards their final influence in the formation of a heavy egg-laying strain.

It must be confessed that trap-nesting has not proved as useful or as authentic in practice as was first thought possible. Trap-nesting has, however, done great good, but perhaps more in the direction of eliminating the poor layers than in finding out the best and most prolific hens. A number of poultry-keepers who have tried these nests for a number of years have no good word for them, but this is not a proper attitude to adopt. Trap-nests are necessary in order to make selections as a basis for breeding, but by themselves they give insufficient evidence to enable one to achieve good results. It comes to this, that trap-nests in conjunction with a knowledge of the laws of breeding record particulars that are extremely valuable.

It has been proved conclusively that the characteristic of high fecundity is transmitted through the male side, and many are the instances in which the use of a cockerel from a heavy-laying hen, mated with good females, have given excellent results. In this connection it is interesting to read in a contemporary what a writer gives as his opinion. He says:

Although "laying-type" is much disputed, I am convinced it is a point that should go hand-in-hand with trap-nesting. You cannot establish a good laying strain unless they are built on right lines, and I should have no hesitation in discarding an otherwise good layer if she were deficient in these qualities, for she is certain to be the mother of a large percentage of indifferent layers. The fundamental attributes of laying-type are: 1. Short legs, set wide apart, with plenty of stern, and tail carried high. 2. Bright eye. 3. Alert, active carriage. 4. An early riser and late going to roost. The width between the legs is a step to developing a well-proportioned stern, and when this has been attained, nature, abhorring a vacuum, fills the cavity supplied with an increased size of ovary.

Here is given one opinion, but the test can be carried out without trouble by a large number of breeders. What is necessary, however, is that measurements and

results should be recorded with hundreds of specimens of various laying and general purpose breeds and the egg yield noted.

We would advise all smallholders to adopt trap-nesting, but they must not place too much reliance on the results that accrue. They must be read in the light of experience and according to the general laws of breeding. For eliminating the poor layers, discerning the early layers, and for securing cockerels from the heaviest layers this system is admirable. It must not be expected, however, that "like produces like," for this is not the case. The trait of heavy egg-production appears to be transient to the extent that it cannot be transmitted in its entirety to the progeny.

The use of trap-nests entails a certain amount of labour, but even in face of what we say above we are strong believers in their adoption. In themselves they are not sufficient, but as a means to an end they are well worth the initial cost and additional labour.

It is surprising what a small number of self-feeding hoppers are in use among the poultry-keepers of this country. We believe they only have to be tried to be accepted as a valuable accessory to the equipment of any poultry-house. We do not insist that they should be employed for feeding dry mash, but there are a number of other feeding and semi-feeding stuffs that can be given in them with success.

In the chapter on feeding we referred to the use of these boxes and we take this opportunity of again advocating their adoption. For dry mash feeding they are really a necessity; for feeding grit, granulated meat, and granulated vegetable charcoal they save waste and labour. The waste of grit is often appalling. It is not an expensive item in the food bill, but, as every business man knows, it is the saving in minor directions that helps to swell the profit at the end of the financial year. It is with grit as they say with mustard as a condiment—the makers secure their profits from that which is wasted rather than from that which is consumed.

With reference to feeding granulated meat in hoppers, we can only say that we have found it to be the cheapest and most successful method. One might imagine at the outset that the birds would eat too much, and when paying upwards of 20s. a cwt. this would bring about a loss. In our experience we have found that fowls will only take as much of this food as will satisfy the demand of their bodies for animal—nitrogenous—food. It is difficult to determine exactly how much to add to the soft mash or dry mash, but hopper feeding will enable the fowls to take exactly the correct amount. This method of feeding has only to be tried for a few weeks when it will be adopted for good.

We gave our opinion of vegetable charcoal in the last article, and this substance is best fed in hoppers. Nature will have what is required, if it is possible to secure it, and the appetite of the birds in this direction will be guided by the requirements of their bodies.



For dry mash feeding our hoppers are two feet wide, six inches in depth, three feet high at the back, and two feet six inches in the front. The object of the sloping roof is to hinder the birds perching thereon. For grit, meat, and charcoal we use a three-compartment hopper, measuring one and a half feet wide, four inches deep, and fifteen inches high.

One point must be noted in this connection. The houses in which such hoppers are placed must be rat-proof. Although these hoppers should be fixed about six inches above the floor, the waste will be enormous if rats can find an entry. The best way of circumventing this loss, in the case of a small house, is by covering the floor under the litter with small-mesh wire netting. This, of course, should be done in any case.

Perches are included in the fittings, but little need be said about these. The best position is to have them all on the level about fifteen to eighteen inches above the floor. They should be made movable, so as to facilitate cleaning. In a scratching-shed house a dropping-board should be placed six inches below the perches, so as to allow the whole area of the floor for scratching. If possible, at least four feet should be allowed between the backs of the birds and the roof of the house. In cold or hot weather this will moderate the effect in the change in temperature.

For soft mash feeding troughs must be used. These can be simply made by taking two pieces of one-inch boarding, one five inches wide, the other six inches wide, and nailing them together. End pieces must be attached to form feet. For this two pieces of one-inch wood, six inches wide and eight inches long, will do admirably.

All fixtures should be made movable, since otherwise insect pests will find a breeding-place in the dust that will collect in the joins and cracks in the wood. Cleanliness is a necessity, and unless attended to with the utmost care the result may prove disastrous.

## SCOTTISH NOTES.

AN interesting bulletin has just been issued by the West of Scotland Agricultural College, the object of which is to provide utility poultry-keepers in general and farmers in particular with reliable practical advice on the most suitable breeds of poultry and the most approved methods of management. The writer, Miss Kinross, very properly points out that profitable poultry-keeping cannot be learned from text-books alone. Practical experience is just as necessary to the proper management of poultry as it is amongst other branches of farm stock.

The various breeds and crosses kept at the college are carefully described, and the average annual egg-production of each flock is given. Housing and feeding, both of adult and growing stock, are treated in an interesting and practical manner.

The management of ducks and turkeys, too, receives adequate consideration, while valuable information is supplied on natural and artificial hatching.

The reading matter is interspersed with a number of capital illustrations taken from the college pens which show the design of the poultry-houses and the type of fowl kept in the runs.

The bulletin is chiefly for farmers and crofters

whose object is egg-production, but it treats of all matters pertaining to poultry-keeping amongst the rural community.

The Scotch agriculturist has always been somewhat reluctant to accept conclusions based on experiments conducted in more favourable conditions south of the Tweed. In this publication, for the first time, he has the results of reliable experiments conducted in his own country, and in this respect, as in others, it is the most valuable practical publication from the farmer's standpoint that has appeared in Scotland.

The laying experiments were conducted in large open-fronted houses with canvas screens for severe weather and eighteen pullets were placed in each house. The birds were trap-nested, but only the average production is here stated:

White Wyandottes .....	173.8
Faverolles .....	177.6
Rhode Island Reds .....	170.9
Black Leghorns .....	179.2
Australian White Leghorns .....	153.

Other pure breeds are similar to the above. It ought to be mentioned that the Australian White Leghorns were late hatched, and therefore did not have an equal chance with the others.

The highest individual record was 214 eggs in ten months from a White Wyandotte.

The experiment was extended to a few pens of crosses, and unusual though it may appear, the Houdan-Buff Orpington came out on top with an average for sixteen birds of 180.9.

The conclusions reached from the feeding experiments are also of much value to poultry-keepers. Several other experiments are in progress now, and by another year the results of an interesting intensive experiment has been promised. The college is to be congratulated on the valuable work being done by Miss Kinross for the poultry industry throughout the country.

The bulletin may be had on application to the College Poultry Department, Kilmarnock.

It is now some considerable time since the Marquis of Tullibardine took up poultry-keeping, and during the past winter he tested the intensive system near Dunkeld, Perthshire. A number of approved intensive houses were erected and stocked with several well-known pure breeds. The results so far have been entirely satisfactory. Dunkeld is situated in a lovely district, but in close proximity to the wind-swept Grampians, consequently the climatic conditions are not conducive to high poultry production in winter; still the birds did very well, producing from four to six eggs each weekly. Great care is taken that the houses are free from draughts, and wooden floors are recommended.

As litter, peat moss is not in favour, the Marquis believing that it makes the birds dirty, and gets foul quickly, being too much of an absorbent. Dead sand also is disliked, but sharp sand is used to the depth of three inches. This, it is said, not only provides grit, but keeps the legs clean and lets air into the scratching material. Besides the sharp sand, three or four inches of chaff cavings, cut straw, or dried bracken is provided as litter, and the birds are induced to scratch for their food. The usual grains are supplied, with bran, green, and animal food. Forcing foods in the shape of condiments are strictly forbidden,



and pure breeds of productive origin only are stocked; the farmyard mongrel is not tolerated.

The Marquis is enthusiastic in his praise of the intensive system, and has decided to adopt it wherever he keeps birds for egg-production.

The proposal that Scotland should hold a great international show has taken shape. A number of fanciers in and around Glasgow are working with commendable energy for the success of this great event. A secretary has been appointed and the show is to be held in Glasgow on November 27 and 28. The amount of money promised up to date is £130. The secretary, however, is making an earnest appeal, through the Press, for an additional £70, so that the



**ELECTRICITY AND CHICKEN RAISING.**

(See page 532.)

committee may go to work with the nice little sum of £200.

That the venture may prove a success is without doubt the desire of the whole Scottish Fancy, and those gentlemen who are giving freely both in time and money deserve all honour. It must, however, be pointed out that the executive has been most unhappy in selecting the dates for their show. Airdrie, which is only a few miles distant, had previously fixed on the dates mentioned for their annual show, and as this society has been making a special effort incurring a large expenditure, the clashing of the two fixtures is little short of a calamity. In all probability the Minorca, Orpington, Wyandotte, and Dumpy Club shows will be held in conjunction with the Airdrie Show.

The success, therefore, of the poultry section of the Airdrie Show is assured, but the effect on the Glasgow fixture must be very serious. Surely it is not yet too late to remedy this unfortunate arrangement.

## SPANISH INFLUENCE UPON EUROPEAN BREEDS OF POULTRY.

SPAIN has exerted a considerable influence upon European poultry. There is probably, however, no country of an equal standing in Europe where less attention has been given by the people generally to the production of eggs and poultry, and where the consumption is smaller per head of population. Physical conditions may to some extent account for this. The great tableland which comprises Central Spain, with its extremes of heat and cold, its arid nature, and the absence of watercourses and trees, is favourable neither to fowls nor to any other kind of poultry. Such districts as give some attention to this branch of live stock are mainly on the coast, specially in the north along the Bay of Biscay, whence are obtained eggs with deep-coloured yolks, favoured greatly by cake makers; in the north-western sections of Catalonia, around Barcelona; and in the south, from the port of Cadiz to Gibraltar.

### THE TURKEY.

In a work published at Havana in 1888, entitled "The Zoology of Columbus and the First Explorers of America," by Juan Ignacio de Arcenas, it is stated that the turkey was discovered by Pedro Niño, on the coast of Cumana, in 1499, and that he brought some of these birds with him on his return to Spain. Probably in these earlier years the numbers introduced were very small, and their food value was not properly realised. It was nearly two decades later when the conquest of Mexico was accomplished. Then the true value was revealed.

So far as records are known, the turkey was introduced into England in 1524, brought probably from the port of Cadiz, where ships trading with the Orient were accustomed to call. At that time traders dealing with the Mediterranean east of Gibraltar were called "Turkey merchants," which may be the explanation of the name given to this bird. In nearly all countries, inclusive of Spain, even Turkey itself, this bird is called the "Indian fowl." Even Dr. Samuel Johnson was misled by the name, as he stated that the turkey was Oriental in origin. Comparatively few turkeys are bred in Spain, and such as are there compare favourably with those found across the Pyrenees in France, in England, and America.

### SPANISH FOWLS.

To what extent the Moors during their long sojourn in the Peninsula were engaged in the breeding of poultry for supply of food has not been revealed. The indications are that this people paid more attention to what may be termed minor live stock than did the Spaniards. To some extent this suggestion is supported by the fact that the native fowl of Spain, known as the Castilian, is in common parlance called the "Moorish" fowl.

Although the poultry population of Spain is small considering its area and number of inhabitants, it has contributed several valuable breeds to the common stock, some of which were disseminated through the Netherlands when the Low Countries were subject to the House of Burgundy. The basis of all appears to



be the Castilian fowl already referred to. That is practically unknown elsewhere, though its influence is evident. That is very much of the type of the English Minorca. The last-named has undoubtedly descended from the former, though modified as a result of English conditions and methods of breeding. What we know as the Minorca appears to have come to Devonshire by way of the Island of Minorca, whence the first importations are recorded as having taken place in 1830. Shortly afterwards the then Sir Thomas Dyke Acland brought birds to Holnicote direct from Minorca, and it is generally believed that these were the parents of the race in the south-western districts of England. It is of interest to note that English Minorcas have been exported to Spain for the purpose of improving the native stocks. In the sixteenth century the Spaniards introduced some races of fowls into the Netherlands, probably Castilians, which in the hands of Dutch breeders were transformed into what we now call the White-faced Black Spanish. In all respects, save the white kid-like skin on the face, the two breeds are identical in general characters.

Another breed which we owe to Spain is the Andalusian, often called the Blue Spanish, at one time having a fair amount of popularity by reason of the large-sized eggs produced by hens of this breed. It has had a remarkable fascination for fanciers and exhibitors, by reason of the difficulties in securing the slate-blue plumage desired. Further, the Barbezieux fowl, found in South-Western France, is undoubtedly descended from the Castilian. All these races have general features in common, and are prolific layers of large white-shelled eggs. The main reason for their not having attained greater popularity is that they are somewhat delicate of constitution.

#### LOCAL CONSUMPTION.

Various attempts have been made to improve the table poultry of Spain, which are, almost without exception, very poor indeed—worse, in fact, than those of almost any other part of Europe. Better birds are to be met with in the San Sebastian district, due in some measure to French influence, and, also, to the fact that breeders such as the Duc de Lecera have imported English Dorkings. The only native breed which has any pretension to meat qualities is that known as the "Prat," found in Catalonia. This has been based upon the Cochin crossed with the native fowls.

Consumption of eggs and poultry in Spain is comparatively small. The estimated production during 1913, as stated by official returns, was about 1,200,000 great hundreds, and the importation 743,000 great hundreds, that is, of the total consumption 60 and 40 per cent respectively. As against these the exports were 93,500 great hundreds, thus leaving a margin of 1,849,500 great hundreds, which is only equal to  $11\frac{1}{2}$  eggs per head of the population per annum, or about one-tenth of British consumption. The greater part of the imports are obtained from Morocco. The shipments of eggs to the United Kingdom in 1913 were 31,634 great hundreds, in value £13,812. Last year the average prices of eggs were as follows: March to August, 8s. 4d. per 120, September to February, 17s. 6d. per 120.—*The "Times" Spanish Number.*

## POULTRY-KEEPING ON A SMALL HOLDING.

THE object of the year's work (April 1, 1913, to March 31, 1914) has been to obtain the greatest amount of profit from poultry-keeping on purely utility lines, in a manner that can be practised by any smallholder able to devote about two hours a day to the work. The same piece of grass-land, a trifle over half an acre in extent and divided into six pens, was in use for the third year in succession. The grass is kept in good condition by resting the pens for periods of a fortnight to a month when there are signs of their becoming bare.

The houses all have floors and are bedded with peat moss, which is changed three times a year for adult birds, but at frequent intervals in those houses which contain young chickens. No allowance has been made in the accounts for the value of this as manure.

One pen only was used to rear the chickens until they were old enough to leave the hens, at which age the chickens were passed on to a fresh pen until about ten weeks old, when the sexes were separated.

During the year it was decided to replace the whole of the stock by pullets which were raised entirely from one breeding pen belonging to the smallholder.

The year opened badly for this object owing to the difficulty of obtaining broody hens in the early months. Another misfortune occurred in the loss of a great number of the earliest hatched chickens through the depredations of a cat.

Hatching commenced on February 5 and terminated on June 24, hens being used. Each hen was given twelve eggs, and an average hatch of 9·4 chickens per sitting resulted, the total number of chickens hatched being 188. The number of losses amounted to 61. The net result was as follows:—

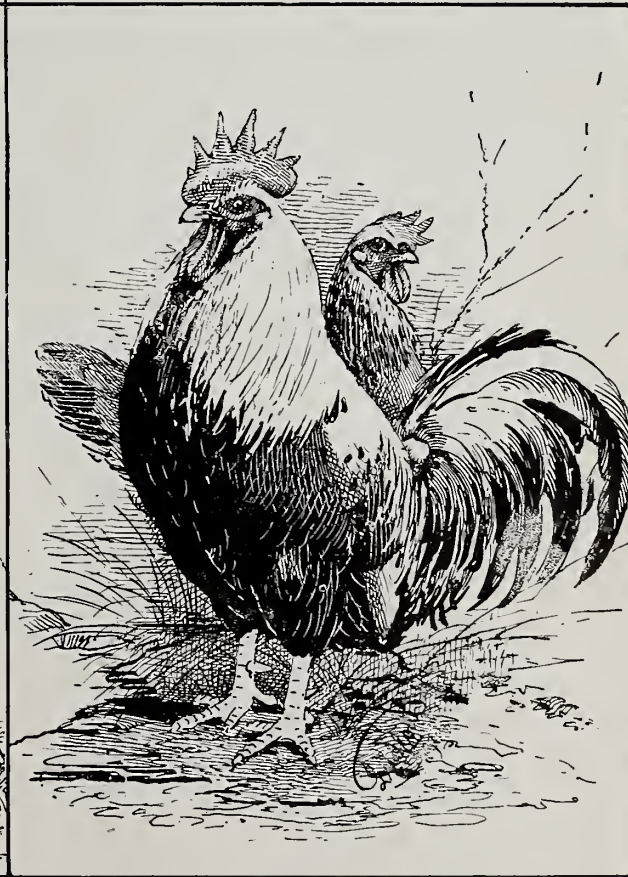
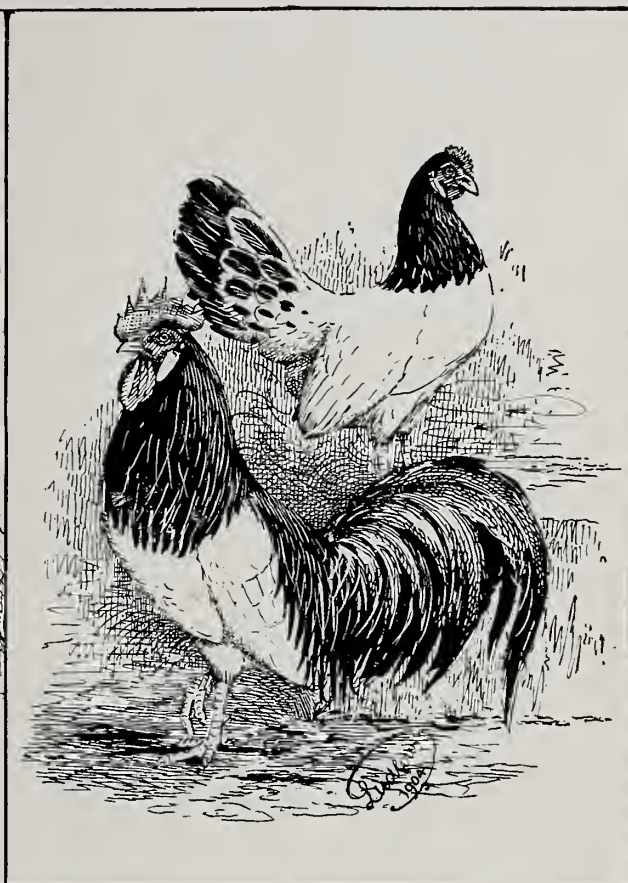
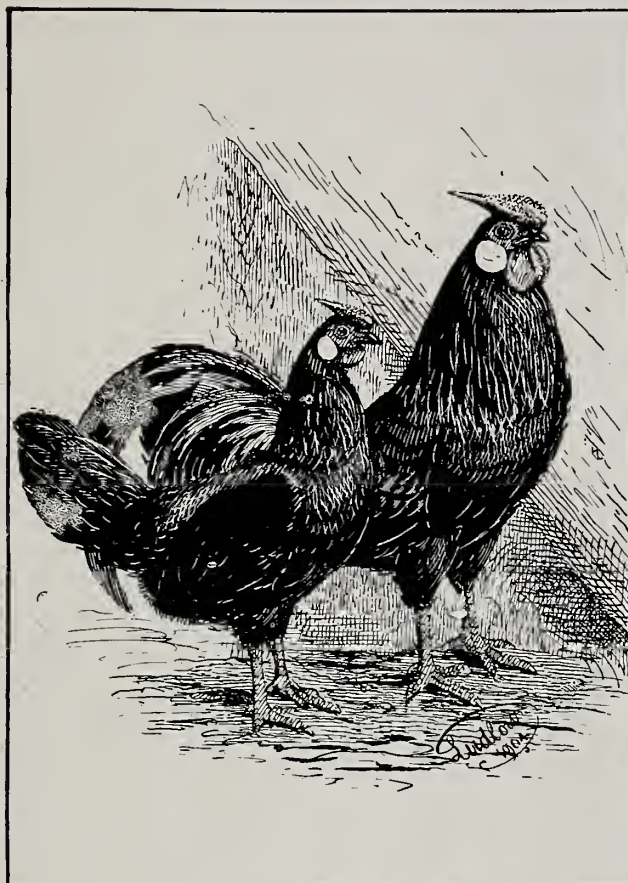
Number of chickens at beginning of the year.....	16
Chickens hatched .....	188
	<hr/> 204
Cock chickens bought .....	15
	<hr/> 219
Losses .....	61
	<hr/> 158
Cockerels sold .....	83
	<hr/> 75
Pullets retained for stock.....	75

*Feeding.*—A considerable amount of time and labour was saved by reducing the quantity of soft food, the systematic use of this class of food during the winter being discontinued and only occasionally resorted to when the weather became severe. It was found that when the birds once commenced to lay, the egg yield was maintained on grain feeding, in which maize occupied a prominent place.

(Continued on page 538.)



FOUR USEFUL BREEDS.



1. Black Hamburgs.  
2. Plymouth Rocks.

3. Lakenfelders.  
4. Silver Grey Dorkings.



The various kinds of food used, together with the quantities and cost, were as follows:—

Class of Food.	No. of lb.	Cost.
		£ s. d.
Wheat .....	4,900 .....	15 6 10
Maize .....	2,380 .....	7 4 9
Meal .....	609 .....	2 19 8
Barley .....	420 .....	1 3 9
Sharps .....	336 .....	1 5 0
Chick seed .....	161 .....	18 2
Bran .....	112 .....	6 3
Meat meal .....	84 .....	15 8
Oyster shell .....	224 .....	9 0
Flint grit .....	112 .....	3 6
	9,338 .....	£ 30 12 7

*Sales.*—All eggs were sold as “new laid,” and were disposed of either on the day of laying or on the day after; they were delivered clean, and no badly-formed or very small eggs were included.

During the year 152 birds were sold—i.e., 65 hens, 83 cockerels, 2 cocks and 2 pullets. These were marketed in the feather, being placed in crates which were taken by the local carrier to the purchaser in town, who paid carriage.

The cockerels weighed when sold from 3½lb. in the early part of the season to 3¾lb. later, no birds being fattened, though they were fed rather freely on whole maize; the first birds were sold on May 15 and the last on November 4.

In order to avoid overcrowding half the hens were sold in June, and the remainder on October 20, from which date until November 5 no eggs were laid.

The result of the year's trading shows a balance of £16 16s. 10d., from which must be deducted the items of rent, interest, and depreciation.

The total amount of capital employed does not exceed £30.

*Record of the Number of Birds in Stock and Eggs laid for each month from April, 1913, to March, 1914.*

1913	Cockerels.	Pullets. 1912 hatched.	Chickens.	Sales.	No. of Eggs laid
April .. a	2 ..	67 ..	16		
.. b	— ..	— ..	30		
.. a	2 ..	67 ..	46		
.. c	1 ..	2 ..	—	3 ..	1,144
May .. a	1 ..	65 ..	46		
.. b	— ..	— ..	53		
.. a	1 ..	65 ..	99		
.. c	— ..	5* ..	6	10 ..	1,064
June .. a	1 ..	60 ..	93		
.. b	— ..	— ..	44		
..	— ..	— ..	7§		
.. a	1 ..	60 ..	144		
.. c	1 ..	29 ..	—	30 ..	446
July .. a	— ..	31 ..	144		
..	— ..	— ..	8§		
.. a	— ..	31 ..	152		
.. c	— ..	— ..	10	10 ..	315
August .. a	— ..	31 ..	142		
.. c	— ..	1† ..	15	15 ..	297
September a	— ..	30 ..	127		
.. c	— ..	3 ..	15	18 ..	251
October .. a	— ..	27 ..	112		
.. c	— ..	27 ..	16	43 ..	65
November a	— ..	— ..	96		
.. c	— ..	— ..	21	21 ..	45
.. a	— ..	— ..	75†		

1913	Cockerels.	Pullets. 1913 Hatched	Chickens.	Sales.	No. of Eggs laid.
December a	1 ..	75 ..	— ..	— ..	154
January .. b	— ..	2 ..	— ..	— ..	
.. c	— ..	77 ..	— ..	— ..	
February a	1 ..	2 ..	— ..	2 ..	441
..	— ..	1† ..	— ..	— ..	
.. a	1 ..	74 ..	— ..	— ..	
.. b	— ..	— ..	31 ..	— ..	932
.. b	— ..	— ..	73 ..	— ..	1,106
March .. a	1 ..	74 ..	104 ..	152 ..	521½

\* 1 killed by a dog.

† All pullets transferred to previous column.

a = Stock; b = Hatched; c = Sales.

‡ Died.

§ Purchased.

*Table showing the Amount received from the Sale of Birds and Eggs during each Month of the year from April, 1913, to March, 1914.*

Month.	Birds.	Eggs.	No. of Eggs. sold per ls.
	£ s. d.	£ s. d.	
April .....	4 3	3 5 8	13—12
May .....	1 6 6	4 0 0	12—11
June .....	3 4 6	2 7 0	11—10
July .....	1 5 0	1 16 6	10—9
August .....	1 13 9	1 13 4	9
September .....	1 11 3	1 13 6	8—7
October .....	4 3 6	10 0	7
November .....	2 1 6	8 0	6
December .....	—	1 6 0	5—6
January .....	8 0	2 14 0	6—8
February .....	—	4 5 0	8—10
March .....	—	4 8 6	10—12
	£ 15 18 3	£ 28 7 6	

*Trading Account.*

	£ s. d.	Sales—	£ s. d.	£ s. d.
Stock, 1st April, '13	8 9 10	Eggs .....	28 7 6	
Food .....	30 12 7	Birds .....	15 18 3	
Birds .....	1 15 0	Sittings .....	14 8	
Carriage .....	1 14 5	Sacks .....	4 1	
Sundries .....	18 7			45 4 6
Balance .....	16 16 10	Compensation .....	7 0	
		Stock, 31st March, '14	14 15 9	
	£ 60 7 3		£ 60 7 3	

*Statement showing the Number of Cockerels sold, with the approximate Weight and Prices realised for each Month.*

Month.	No. of Birds.	Weight. lb.	Price obtained. £ s. d.
May .....	6	19½	0 16 6
June .....	—	—	—
July .....	10	35	1 5 0
August .....	15	56½	1 13 9
September .....	15	56½	1 8 3
October .....	16	60	1 13 0
November .....	21	78½	2 1 6
	83	305½	£ 8 18 0
			s. d.
Average price per bird .....		2	1.73
.. .. lb. ....		7	

With two exceptions the stock was free from disease throughout the year.—*Journal of the Board of Agriculture.*



## POULTRY COOKERY.

### Cold Luncheon Dishes.

As a rule, during the warm weather a cold luncheon is considered decidedly preferable to a hot one, and housewives are glad that this is so, as it provides a good opportunity for them to display their skill in garnishing the various dishes. The time required for this purpose should never be begrudged, as it is really time well spent and a most important point gained if we can thus tempt and stimulate the appetite, which in the summer-time is apt to be so very capricious and difficult to please. The following dishes will, perhaps, prove a means towards this end.

**FOWL A LA STRASBURG :** Prepare the birds in the usual way, then bone them very carefully and cut them up into small neat pieces. Season these pleasantly with salt, pepper, and grated nutmeg, cover them over, and set in a cool place until required. Stew down all the bones and odd trimmings with an onion stuck with two or three cloves, a carrot, and a small quantity of fresh celery cut in pieces, a seasoning of salt and pepper, and sufficient cold water to cover the whole; and when the liquid is reduced to about half the quantity, strain it carefully and allow it to cool. Have ready a straight-sided jar or a deep pie-dish, and fill this with alternate layers of chicken, prime lean ham or bacon cut in small pieces, and hard-boiled eggs cut in slices or quarters. Sprinkle each layer with a little finely-chopped parsley, and, after pressing the ingredients down quite firmly, pour the stock over, cover the dish very closely, and bake in a moderate oven until, when pierced with a fine skewer or a knitting-needle, the meat feels quite tender. Let the dish remain covered until the contents are quite cold; then, when required, serve turned out on to a suitable dish, tastefully garnished with sprigs of seasoned watercress and slices of fresh lemon.

**GATEAU OF FOWL :** Mince together, very finely, half a pound of cold cooked chicken and four ounces of cooked ham or very prime bacon, and put the meat into a bowl with half its bulk in fine white bread-crumbs which have been soaked in milk or white stock and squeezed dry. Season according to taste, moisten thoroughly with well-beaten fresh eggs so as to form a stiff batter, then turn into a round or oblong mould, about three inches deep, which has been liberally greased and sprinkled with finely-chopped parsley. Cover the top with several folds of greased white paper, and either bake in a moderate oven or steam over plenty of steadily-boiling water until the gateau is quite set. When cold, turn out on to a flat dish, garnish with carefully-picked watercress which has been pleasantly seasoned, and fancifully-cut slices of bright-red boiled beetroot, and serve accompanied by a dish of mixed pickles, or, if preferred, by a green or a potato salad.

**DUCKS WITH PIQUANT SAUCE :** Prepare and roast in the usual way a couple of fine plump ducks, and when cold cut them up neatly into small pieces and slices. Place these in a bowl with a sauce made of two hard-boiled egg-yolks which have been rubbed through a sieve, a seasoning of salt and pepper, five or six large tablespoonfuls of fine salad oil, two tablespoonfuls of tarragon vinegar, and one tablespoonful of pure malt vinegar. Toss gently until the various ingredients are

well blended, then dish up in a pile on a suitable dish, garnish tastefully with cooked French beans, slices of hard-boiled egg, and tiny heaps of boiled beetroot cut in small dice or in julienne shreds, arranged alternately.

**EGG CUTLETS :** Prepare three-quarters of a pint of good béchamel sauce, and, while still hot, stir into it a pinch of salt and cayenne and two well-beaten fresh eggs; continue stirring over a moderate heat until the sauce becomes thick without boiling, then add six hard-boiled eggs cut in tiny dice, two tablespoonfuls of lean ham previously cooked and finely chopped, one teaspoonful of minced parsley, and, if they are to be had, half-a-dozen chopped mushrooms. When the various ingredients are thoroughly blended, turn out the preparation in a flat cake of even thickness, and when cool divide it into small portions about as big as an ordinary hen's egg; form these into neat little cutlets, then egg-and-breadcrumb them in the usual way, taking care to render the coating thick, firm, and perfectly smooth. This is quite easily done by patting the cutlets gently with a broad bladed knife, which should be dipped frequently into hot water during the process. When ready, fry them in a wire frying basket in plenty of boiling clarified fat, sufficient in quantity to quite cover them. As soon as the cutlets are done enough and coloured a rich golden brown, drain them thoroughly by placing them on a sieve, and, when quite cold, dish them up tastefully on a pleasantly-seasoned, finely-shred green salad which has been arranged on a flat dish in readiness. Garnish the edge of the dish with slices of fresh tomatoes and cucumber placed alternately, and serve.

**FRENCH CUSTARDS :** Break four or five fresh eggs into a basin and beat them well with a whisk, then add two ounces of sifted white sugar, a saltspoonful of salt, a few drops of some flavouring essence, and half a pint of cream, and mix thoroughly. Butter the requisite number of small dariole moulds and nearly fill them with the custard, then steam very gently over plenty of steadily-boiling water until just nicely set. Meanwhile, cut some thick slices of stale sponge cake, and with a round cutter a little larger than the tops of the moulds stamp them out and fry in clarified butter until coloured a pale golden brown. When ready, turn out the custards on to the rounds of cake, and ornament the tops with candied cherries cut in tiny pieces, and thinly cut strips of angelica, and serve cold, neatly arranged on a pretty lace dish paper.

**FRUIT :** As regards the selection of this the housewife must, of course, be guided as to what is to be had, and only that of the finest quality should be served. Arrange it in pretty glass or china dishes, and, when possible, garnish it with its own leaves; or, failing these, with crystallised leaves, a most useful item which should always be kept on hand.

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## HOUSEHOLD HINTS.

**BROWN RASPIGS.**—Gather together any odd crusts of bread which are not suitable to serve, as they are, and place them on a baking sheet in a cool oven. When nicely browned through and quite crisp, without being at all burnt, put them on a baking board and crush them to a powder, then pass them through a sieve to make sure that no lumps are left, store them



in a perfectly dry tin box, and keep in a cool place until required.

**BROWN CRUMBS.**—Pass some stale white bread through a wire sieve, and put the crumbs into a stewpan with a small proportion of fresh butter; stir them about with a wooden spoon, over a moderate fire, until brightly browned, then drain carefully on blotting or soft kitchen paper, and serve on a small hot dish covered with a dish paper. These form a very simple but highly appreciated accompaniment to game, but they must be served quite hot, crisp, and dry; if at all greasy, or just warm, they are not at all nice or appetising, and had better be dispensed with.

**DRIED HERBS.**—These may either be kept in bottles or in small bunches, and are most useful items to have at hand during the winter months, when there are no fresh herbs to be had. Gather the various items on a dry day, just before they begin to flower, free the leaves carefully from all grit, soil, &c., tie the herbs up in small bunches and dry them thoroughly, either spread out before the fire or in a cool oven with the door open. This drying process should be accomplished as speedily as possible; at the same time, the greatest care must be taken to prevent all danger of burning. When thoroughly dry, store the tiny bunches in strong paper bags and hang these up in a cool, dry place. Each herb may be tied up separately if thought desirable; but it is generally considered a better plan to mix them. This, however, is entirely a matter of individual taste.

**MIXED HERB POWDER.**—When the herbs have been gathered and carefully dried, strip off the leaves and put them into a mortar with a liberal grating of nutmeg, some powdered mace, cloves, pepper, and grated lemon rind; pound all together until thoroughly mixed, then pass the powder through a sieve and put it into small, quite dry, bottles. Cork very securely and store in a cool place until required. To make a full, pleasantly flavoured powder, mix together the following quantities:—Three ounces each of thyme, marjoram and basil, one ounce of bay leaves, two ounces of winter savory, half an ounce of grated lemon rind, half an ounce of cayenne pepper, one ounce each of grated nutmeg and powdered mace, two ounces of whole pepper, and two ounces of cloves. Additions, or omissions, may, of course, be made, and quantities can be varied in accordance with different tastes, but the above proportions are, as a rule, found highly satisfactory.

**HOME-MADE LARD.**—Every housewife knows how very much better this is than bought lard, and though the business of preparing it is not a particularly pleasant task, still it will repay one for the trouble involved. A very good method is as follows: Take the fat from the inner part of the pig soon after the animal has been killed, and cut it into thin slices, carefully removing from each piece all skin and blood; put the slices into an earthenware jar and set this in a pan of boiling water; then, as the fat dissolves, keep pouring it off into small hot jars. When quite cold, cover the tops with prepared bladder, tie securely and store in a cool place. Small jars are decidedly better for this purpose than large ones, or than the bladders

which are often used, as lard very soon loses its nice freshness if exposed to the air.

**DRIED PARSLEY.**—Gather the parsley in nice large sprigs, then wash it well in cold water, and throw it into a saucepan of boiling water which has been well salted. Boil for two or three minutes, then take up the sprigs, drain them thoroughly, and dry them either in a cool oven or spread out in front of the fire. The drying must be accomplished quickly, or the parsley will lose considerably in flavour. Store in a tin box with a very tightly fitting lid and keep in a cool, dry place. When required, soak the parsley in warm water for a few minutes in order to freshen it up, and press it gently in a clean soft cloth to absorb the moisture, then it is ready for use.

**TO CLARIFY DRIPPING.**—When dripping has been used several times for frying purposes it is apt to become rather dark coloured and full of small black specks, which quite spoil its appearance; gravy, too, often settles at the bottom of the bowl, and this, if allowed to remain too long, will turn the dripping quite sour. Both these evils can be remedied by clarifying the fat in the following manner: Cut the dripping up into small pieces and put it into a strong iron saucepan with about a pint of boiling water, then set it over a slow fire and allow it to melt and become quite hot. When every morsel is dissolved pour the whole into a large bowl, and when thoroughly cold carefully remove the fat, which will have settled on the top, and it will be found that all impurities have sunk to the bottom, and so can very easily be removed, thus leaving the dripping quite pure and fresh.

**BROWN ROUX.**—Melt half a pound of fresh butter in a basin, and when entirely dissolved pour off the clear oily part into a small saucepan, being very careful to leave every particle of sediment behind. Place the saucepan over a gentle heat and shake into it, very gradually, as much fine flour as will form a thick smooth paste—from seven to eight ounces is generally required. Stir constantly with a small wooden spoon and heat the preparation slowly and equally until it becomes very thick and of a bright brown colour. When ready put the roux into a jar, and when cold cover it closely and store in a cool place. A teaspoonful of well-made roux will thicken half a pint of gravy, and if the jar is kept closely covered it will remain quite sweet and good for almost any length of time.

**WHITE ROUX.**—This is made in precisely the same manner as the brown roux, only great care must be taken to prevent it acquiring even the faintest tinge of colour. Store as already directed, and use for the thickening of white sauces, soups, &c.

**FRIED DICE FOR SOUP.**—Cut slices of stale bread about one third of an inch thick, then divide these into neat square dice. Have ready a saucepan containing a good supply of boiling clarified fat, and into this drop the bread very gently; stir the dice well, but carefully, so as not to break them; then, when well and evenly browned, drain thoroughly on blotting or thick kitchen paper, so as to ensure crispness, and either drop them into the soup just immediately before serving, or send them to table neatly piled up on a small hot dish or plate covered with a dish paper or a folded napkin.



## DOGS THAT MAY HELP TO MAKE HISTORY.

SIR E. SHACKLETON'S NINETY-NINE "HUSKIES"  
NOW IN QUARANTINE.

SIR ERNEST SHACKLETON'S DOGS, which arrived in London from Canada on Tuesday, July 14, have taken kindly to civilisation; but their stay in England quickly drew to a close, for on Wednesday, July 29, the Trans-Antarctic expedition ship, the Endurance, sailed from West India Docks for Buenos Aires. They are big-hearted, lovable creatures, these ninety-nine happy

the change of diet. These half-savage team-dogs had never tasted a biscuit until they started on the voyage from Montreal to London, but they consumed two thousands pounds of Spratt's "Meat Fibrine" Dog Cakes by the time they arrived, and now are confirmed biscuit eaters. That they should have taken so readily to their new food is indeed most fortunate, for much more depends on this than one would imagine. The late Captain Scott admitted that his failure to reach the Pole on his 1901 expedition in the Discovery was due to the fact that he substituted Stockfish for biscuits as food for the dogs which accompanied him on his final dash. In his report appear the following remarks: "It would be unprofitable, as well as dismal, to give a close history of the



Eleven van loads of Sir Ernest Shackleton's Antarctic expedition dogs leaving Millwall Docks for Spratt's Quarantine Kennels at Beddington, where a Spratt's dog cake diet will put them in condition for their arduous work on the Southern icefields. Insets show three types of the dogs.

dogs that know not their fate, but as the Canadian teamster who accompanied them from Winnipeg remarked to a reporter on their arrival, "they just fight like blazes when they get together, unless they are in the teams of five in which they work."

Sleighing and hauling fish is their chief use in Canada, and each is capable of drawing a load of at least one hundred pounds. They can travel forty miles a day, if necessary.

In their native homes away out in the North-West Territory and along the shores of the Hudson Bay, where half their ancestry was composed of wolves, they have lived mainly on fish, but while they were at Spratt's Quarantine Kennels at Beddington biscuits were substituted, and the remarkable manner in which they flourished during the spell of hot weather while being used to intense cold speaks well for

further career of our wretched Dog Team. They failed us almost immediately after we had formed such high hopes of travelling a long distance. The failure was certainly due to the Stockfish."

There is, however, no fear of anything of this sort happening in connection with the Trans-Antarctic Expedition, for Sir Ernest Shackleton has made ample provision for feeding his dogs on biscuits, the supply of Spratt's Dog Cakes on board the Endurance being sufficient to last throughout the Expedition.

The dogs answer promptly to their names—Blackey, Collar, Noble, Captain, Nero, Colonel, Chimo, &c.

Of the ninety-nine, whose ages range from one to six years, 80 are unusually large, the remainder being younger and somewhat smaller. In many of them the features of the St. Bernard, Newfoundland and German Wolfhound are very pronounced, but they are all half-



breeds. "Fox" is a very pretty dog, if not the prettiest of the pack. A remarkably clever and well-trained animal, he is one of the team-leaders, although but a year old. "Light," an all-grey dog of the Prairie Wolf type, is another of the team-leaders. He is the champion of them all, the best worker and the fiercest fighter.

#### Queen Alexandra's Interest in the Expedition.

Queen Alexandra, with her sister, the Empress Marie of Russia, and Princess Victoria, visited Sir Ernest Shackleton's ship on Thursday, July 16th, when Lady Shackleton and her three children and the ship's officers and company were presented to her Majesty.

## ADVANTAGES OF PORTABLE HOUSES.

ONE hears so much at the present time about the semi-intensive system of poultry-keeping, also about the scratching-shed plan, and other artistically designed houses which are all on the permanently fixed principle. Consequently one is tempted to ignore the many advantages of the portable house. It is not intended to suggest that there are not advantages, and very important ones, in both the semi-intensive and the scratching-shed plans of housing. The former is excellent for keeping a large number of fowls together during the winter months, and no doubt it tends to



Eleven van loads of Sir Ernest Shackleton's Antarctic expedition dogs crossing London Bridge.

The visitors inspected the shore party's hut and every part of the *Endurance*, and at the close of their stay Queen Alexandra presented Sir Ernest with two silk flags—one her standard and the other a Union Jack—and a mascot in the shape of a medallion representing St. Christopher.

Sir Ernest, in thanking her Majesty, said he would take the gifts with him on his journey across the Antarctic.

We never stint our fowls of fresh green food. Cabbages and "seedy" lettuces we can get in abundance at present. Dandelions, too, young and tender, we can pull at any time; cut up in a raw state, they mix well with the mash.—*Poultry.*

increase the number of eggs in cold weather. The scratching-shed form of house is the best known system for those poultry-keepers who must of necessity restrict their operations owing to lack of space. The portable house is essentially the house for the farmer's fowls, since it affords the opportunity of scattering the birds about the land. The colony system entirely obviates the danger of impure land, provided, of course, that the system is thoroughly and properly carried out by regular removal from place to place. This doubtless is one of the greatest advantages possessed by the portable house. The great and rapidly increasing number of fowls in practically every village and suburb in the United Kingdom increases the danger of contamination. Where fowls are kept always on the same place, the chickens in turn are reared under the same conditions, and neve



have the opportunity to develop as those that are allowed absolute freedom and continual change during their days of growth.

There can be no doubt that when the fowls are kept in small flocks in portable houses the cost of appliances is one of considerable moment, yet this expense is more than counterbalanced by the amount of profit accruing; not only so, but there can be no doubt that poultry with unlimited space over which to roam are usually in a better state of health. By the use of portable houses advantage may be taken of permanent pasture, meadow land, and also stubbles. The latter is of inestimable value, for not only is food to be had in plenty, and what is of greater benefit still the fowls enjoy a complete change by having the run of the sweet and fresh ground after the growth of the corn. It is a very gratifying feature to note that on the majority of farms where there is arable land, advantage is taken of this economical system of portable housing. It is only during recent years that it has become at all general, yet it is not adopted to anything like the extent that it deserves. The advantage of this change from place to place as the various farm operations permit, is usually only enjoyed by the adult stock. There is, however, no reason why the young stock should not have the same privilege. By the end of harvest, chickens are quickly approaching adulthood, and a period in their life when change of environment and an ample supply of natural food is of the greatest service, especially for those birds that are intended ultimately to fill the breeding-pens. There are many excellent forms of small houses on the market which are so constructed that their removal is not a very difficult task, and this is important since if the houses remain too long on one spot the object of the whole system is defeated. In addition to the advantages to the poultry, the land also benefits by the fowls' running thereon. This is very apparent in both pasturage and meadow land, provided, of course, that the fowls are kept in moderate numbers—say, sixteen per acre, and methodically moved at frequent intervals. The question of shelter is very often brought forward as an argument against the colony system. Shelter is, of course, a necessity, and while perhaps the portable house does not lend itself so readily to the provision of this addition to the fowls' welfare as does the permanent house, yet the difficulty is not an unsurmountable one. Temporary shelters against the sun's rays of July and August can be easily erected. The birds may be allowed to remain in the open fields over the autumn, but with the approach of wintry weather it may be found necessary to bring them nearer to the farm buildings for protection. The adoption of the open-fronted portable house is now becoming quite common, and there is a great deal to be said in its favour. Provided that it is properly built with adjustable shutters to combat wind and rain, it may be used with advantage even in the most exposed places.

#### New Zealand Production.

At the recent Poultry Conference held in Wellington, N.Z., an estimate was made that the value of the poultry industry to that colony is £1,250,000 per annum. A resolution was passed in favour of a control system for eggs exported.

## SPREADING THE CHICKENS.

WE learn slowly. If experience results in the adoption of better methods, then it is ultimate gain. For chicken-rearing, except such as are intended to be killed early, distribution is the way of success. Mr. G. A. Palmer, in the *Farmer and Stock-breeder*, makes some useful suggestions as to how this may be carried out:

"This question of crowding is one that deserves fuller consideration. Even where the rearing field is large and the brooders a considerable distance apart, the chickens will mix to some extent, and the longer the grass the more likely they are to get lost and work to the wrong brooder. We find it necessary every night to look into each brooder and small house, and often to pick some out and carry to their own place. This has gone on to such an extent that I am now convinced that even where there is unlimited room, as on a farm, if chickens are to be reared in great numbers it is cheaper to wire out a piece for the brooders so that each lot is perforce kept by itself.

"For this purpose 3ft. netting of lin. mesh is best, about 12 yards square being allowed to each run. I intend to put some up for next year. The expense will not be great, as any light sticks will support the netting. Six rolls of wire netting 50 yards long each would do a line of eight pens. This would take nearly a quarter of an acre. A clean orchard would be the best place, and here could be kept the brooders most suitable for young chicks. Everyone knows the kinds that have raised floors with lamp underneath and heat radiators with hovers. The chicks can be hampered and carried to brooders of the other type out in the open field, those more roomy, with the lamp in the centre, and I particularly favour that one in which the whole brooder chamber can be lifted out, so that the two parts are in one, as it makes quite a useful small poultry house. The chickens strayed more to other brooders last night than ever before. The fact is, the grass has grown, and especially the bents have got up during the last few days. They are on a piece of comparatively new turf, and the bents do get up more than on old pasture. Last year I machined half the field, and the improvement to the pasture, as noted by many farming visitors, was so great that I will run over the whole next week. There is no bottom grass, as it has been kept bare by ewes and lambs, and being so sweet from continual rearing and dressings of slag, they eat every scrap to the roots except these bents.

"The advantage to the chicks is enormous, as the tips of the bents hold so much moisture after rain and even in early morning that they get draggled. It means also a great deal of comfort to the attendants, especially when they are ladies, as is often the case at a farmhouse. There will be nothing worth raking together. To cut it the knives must be very sharp, and there must not be much wind, or it blows the bents away from the knives and they run over them. The bents are shorter than usual this year, owing to the severe frost late in May, which turned them brown and yellow, a thing I have never seen before."



## POULTRY CLUB.

THE monthly meeting of the Council was held on July 10, at the London Chamber of Commerce, Oxford Court, Cannon Street, London, E.C. Mr. L. C. Verrey was in the chair, and there were also present Messrs. A. C. Fowell, William Rice, George Betts, Albert Smith, J. Carlton Hunting, W. J. Golding, and T. Threlford, Hon. Sec. Letters regretting inability to be present were received from Captain Allen and Mr. P. H. Bayliss.

The minutes of the last meeting were read and confirmed.

New members.—The following were elected:—

*Recommended by the Cheshire Branch—*

Mrs. Darragh, Glenside, Leasowe.

*Recommended by the Cornwall Branch—*

Mr. W. A. Luke, Commercial Street, Camborne.

Mr. E. White, Stationmaster, Chacewater.

*Recommended by the Essex Branch—*

Mr. W. Lingwood, junr., Glenville, Osborne Road, Romford.

*Recommended by the Gloucestershire Branch—*

Mr. W. E. Moore, Hardwicke, near Gloucester.

*Recommended by the Kent Branch—*

Mr. T. G. Wickham, Beech View, Marden.

Mr. Gillett Butcher, Rankins, Linton, Maidstone.

*Recommended by the Middlesex Branch—*

Miss Flora B. Blyth, Oak Tree Cottage, Grove Hill Road, Harrow.

*Recommended by the Norfolk Branch—*

Rev. E. C. S. Upsher, The Vicarage, Little Melton, Norwich.

*Recommended by the Sussex Branch—*

Mr. S. H. Pearlless, Effingham Farm, Crawley Down.

Mr. W. G. Watson, 10, Hurst Road, Horsham.

Mr. Samuel Turner, Packington Road, Ashby-de-la-Zouch.

Mr. Edwin Lawrence Luke, "Paradise," Yealmpton, South Devon.

Mr. John L. Jones, "Penlan," Dodorgan, S.O., Anglesey.

Mr. A. H. W. Taylor, The Red House, Bath.

Mr. Henry Tanner, Westgate Buildings, Bath.

Messrs. Lock Bros., Coronation Avenue, Bath.

The following society was associated:—The Ashford Fur and Feather Society. Hon Sec., Mr. S. E. Foster, "Hazeldene," Kent Avenue, Ashford.

Specials.—The following shows announced to be held under Club rules were granted specials:—Presteign and District Agricultural Society, Strathbogie Farmers' Club, West of England Fat Stock and Poultry Society, Crowborough, Rotherfield, &c., Fanciers' Association, Berkswell, &c., Poultry Society.

The Late Mr. John Horn.—Mr. L. C. Verrey said that since their last meeting the Club had sustained a great loss through the death of Mr. John Horn, one of the oldest members of the Club, and who up to the present time was the Hon. Auditor, and he moved a vote of condolence and sympathy with Mrs. Horn and family, which was carried.

Correspondence.—Several letters were read and left in the hands of the secretary to deal with.

In the absence of Mr. Clarke the notice given by him to amend the Breed Cup rules was adjourned until the next meeting.

Sicilian Buttercups.—The Hon. Secretary of the Sicilian Buttercup Club submitted birds for the inspection of the Council in order that this variety might be included in the Poultry Club Standards, and after inspection it was resolved that they be accepted.

Mr. Frederick Chatterton and the White Orpington Club.—Mr. Chatterton complained that the late Secretary

of the White Orpington Club had promised that the club would give a guinea special when the trophy given by him was competed for. The trophy had been competed for at Maidenhead and also at the White Orpington Club Show at York, and the specials were not forthcoming. Mr. Chatterton and Mr. W. W. Broomhead, the present secretary of the White Orpington Club, attended the Council meeting, and from their statement it appeared that the White Orpington committee had not been consulted, and there was no record on the minutes, and therefore the White Orpington Club declined to be bound by the transaction, which they did not authorise.

After some discussion the following resolution was passed:—"Mr. Frederick Chatterton having expressed his willingness to withdraw the trophy the Council recommend the White Orpington Club to pay the guinea specials offered at Maidenhead and the Club Show (York), 1913."

The next meeting of the council will be held on Friday, August 14, at the London Chamber of Commerce, Oxford Court, Cannon Street, London, E.C. Fanciers wishing to become members may send their names to the secretary of the County Branch or to the Hon. Secretary of the Club on or before August 3, and the secretaries of county branches may send in all matter to appear on the agenda to the Hon. Secretary not later than August 5.—T. Threlford, Hon. Sec., 2, St. Luke's Square, Victoria Docks, London, E.

## THE UTILITY POULTRY CLUB.

TWELVE MONTHS' LAYING COMPETITION  
AT SEDLESCOMBE 1913-14.

THE Manager's Report for the ninth period of four weeks has now been sent in to the hon. secretary of the club, Mr. L. W. H. Lamaison, Merstham, Surrey.

It is satisfactory to notice that in spite of a long period of hot, dry weather resulting in considerable broodiness and moulting, no less a total than 3,760 eggs have been laid in the four weeks by the thirty-two pens of four birds each in each section. This works out at an average of 15.8 eggs per bird in the Small House Section, and 14.4 eggs per bird in the Semi-Intensive House Section.

The manager points out that the moulting has been more apparent in the semi-intensive house, but that several of the birds continued to lay, although in full moult, and that all were passing through it easily and quickly.

Very satisfactory pen and individual records have been achieved during the month, pens 11 and 9, White Leghorns, and pen 12, Black Leghorns, making totals of eighty-eight eggs, and a White Leghorn pullet in pen 11 laying twenty-six eggs in the twenty-eight days.

The following are the leading pens at the end of the thirty-six weeks during which the competition has run:

SMALL HOUSE SECTION.							
Position.	Pen No.	Breed.	9 months' Total Eggs.	Total Value. s. d.	Total for 36 weeks. Eggs.	Total Value. £ s. d.	
1	7	White Leghorns ...	63	4 8¾	655	3 13 2¾	
2	11	" " ...	88	6 9¾	674	3 10 11¾	
3	15	" Wyandottes	51	3 11½	653	3 10 1¾	
4	9	" Leghorns ...	88	6 9¾	662	3 9 2	
SEMI-INTENSIVE SECTION.							
1	21	White Wyandottes	71	5 6	658	3 10 5¾	
2	8	" Leghorns...	84	6 6½	639	3 6 7¾	
3	11	" " ...	74	5 8¼	641	3 4 4½	
4	15	" Wyandottes	63	4 10½	577	3 1 9¾	

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## THE UTILITY POULTRY CLUB.

### PROGENY LAYING TEST AND INVESTIGATION OF INHERITANCE OF EGG-LAYING POWERS OF POULTRY.

Large Grant from the Development Fund.

THE schemes of the Utility Poultry Club for a Progeny Laying Test and Investigations concerning the Inheritance of the Egg-Laying Powers of Poultry have now been approved by the Development Commissioners and the Treasury have intimated that they will make a grant from the fund, not exceeding £708, in respect of the work to be done during 1914-15. The Development Commissioners recognise that the work should be carried on for a period of seven years and the Treasury intimate their willingness to give the necessary financial support if the position of the Fund permits and the scheme progresses satisfactorily. The estimated cost of the whole scheme is about £5,000.

The grant is made subject to certain conditions which the committee find no difficulty in agreeing to do, and propose to make a special appeal for the purpose. Considering the substantial support given to the schemes by the Treasury, this amount ought to be raised from the poultry industry.

The Club have been fortunate in securing the co-operation of Major C. C. Hurst in the carrying out of the schemes. Major Hurst has for some years been conducting at the Burbage Experimental Farm at Hinckley, Leicestershire, some important experiments in the breeding of horses and cattle, and recently he has given some attention to poultry. For the due carrying out of the schemes of the Club Major Hurst will be solely responsible.

By the Progeny Laying Test an attempt will be made to show in a popular way the results of breeding from good and bad layers for some years in succession.

The best and worst layers in the best six pens in the present competition will be mated up by the owner of the birds, and from the progeny will be reared a sufficient number of birds to enable another test to be made in the same way, a new male bird being again supplied by the owner. In this way the owners of the pens will be able to demonstrate their ability in mating.

The other part of the scheme is much more ambitious. No experimental work to any large extent has been done in this country to prove how the egg-laying powers of poultry are transmitted. Dr. Raymond Pearl has conducted most interesting experiments at the Maine Experiment Station in the U.S.A. and Major Hurst proposes to carry out similar experiments here on a more extended scale.

The points upon which information is to be obtained are :

1. To test Dr. Pearl's conclusion in regard to the sex-limited inheritance of high winter yield with two of the best utility strains of White Wyandottes and White Leghorns.

2. To investigate separately the inheritance of prolificacy, weight of egg and colour of egg.

From the results obtained from these experiments :

3. To determine any correlations or couplings that may exist in the three characters any whether and correlation exists between these characters and the physical features of the birds.

To carry out the work accurately every bird tested will be separately penned; an expert poultryman and boy and a skilled recorder will be continually engaged throughout the experiments.

Some idea of the magnitude of the work may be gathered when it is estimated that over half a million single records will be made in the seven years. These will provide sufficient data to give a definite answer to many questions of great practical and biological interest.

## EGG-LAYING COMPETITIONS IN QUEENSLAND.

CONSIDERABLE interest attached to the completion of the Egg-Laying Competitions both in Queensland and New South Wales. Queensland lays claim to establishing a new world's record in that the forty pens which carried through the season at Gatton College, Queensland, laid a total of 52,420 eggs, being an average of  $1,310\frac{1}{2}$  eggs to the pen, and 218.4 eggs for each bird for the year's laying. That is indeed a very fine record for so large a number of birds. The leading pen, the property of Moritz Brothers, produced no less than 1,564 eggs for the year, or an average of 260.66 eggs per bird. This pen was closely followed by Mr. A. H. Padman's pen, with 1,536 eggs, and Mr. P. Loloma, with 1,514 eggs. These were all White Leghorns, as were also the two pens coming fourth and fifth in the Competition—namely, those of J. R. Wilson (1,483) and T. Fanning (1,472). Next to these comes the Black Orpington pen of Mr. R. Burns, with a total of 1,453 eggs. Another pen of Orpingtons by the same breeder came eleventh in the list. In all there were thirty-four pens of White Leghorns, three of Brown Leghorns, two of Black Orpingtons, and one of Red Sussex.

The morning feed in the Queensland Competition consisted of equal quantities of bran and pollard (by measure, not by weight), together with  $1\frac{1}{4}$  lb. Sunlight oilcake and  $\frac{3}{4}$  lb. of desiccated meat—to two large bucketsful of the bran and pollard—mixed into a crumbly mass with hot water in winter and cold in summer. Three-quarters of a pint of this was fed each morning about 6.30, except on Sundays, when oats were substituted. At nine o'clock the pens were again visited to see if all the food had been cleaned up and to give more to pens that needed it. This was found to be a better method than giving the full amount at once, with the result that perhaps some food would be left to clean up. This system was followed throughout, except during January, when, desiccated meat being unprocurable, it was omitted from the ration, and the laying fell off somewhat in consequence. At midday chaffed green lucerne was fed, a good handful to each pen, and a little soup meat when available (about twice a week), also a handful per pen. The evening meal consisted of wheat, as much as the birds would eat up clean, about one pint, more or less, according to the capacity of the birds, as all pens do not eat alike. Great care was taken throughout to get all birds to eat as much as possible, without leaving any. Fresh clean water was given every morning, and shell grit was at all times available in the pens. The houses were cleaned out once a week.



# TWELVE MONTHS' LAYING COMPETITION.

THIS competition, which commenced in October, 1913, at the Harper Adams Agricultural College, has now reached the end of the ninth period of four weeks. Fifty pens of six birds each are competing for prizes and medals which are awarded for the largest money value of eggs laid throughout the test. The eggs are graded and valued according to size and market value, thus encouraging the production of winter eggs of good size. This point is borne out very clearly in the case of Pen 2, White Wyandottes, which have laid more eggs than any other pen in the competition, but, owing to the majority of their eggs being produced when market prices were low, they only hold the fifth position.

Pen 18, White Wyandottes, which has been leading since the commencement of the test, unfortunately lost one bird in the eighth month through roup, which was conveyed to them from another pen. This bird was at once replaced. Another bird which was affected is recovering. This has allowed Pen 6 to catch them up and secure the lead for the present.

The total number of eggs laid during the month has been 4,748, which gives an average per bird of 15.8 eggs for the twenty-eight days. The Leghorns still continue to put up excellent records.

One hundred and forty birds have been broody and four have commenced to moult.

The breed averages for the month of twenty-eight days are:

No. of Birds.	Breed.	Average per Bird
102	Leghorns	19.0
18	Buff Rocks	16.4
12	Rhode Island Reds	16.1
144	White Wyandottes	14.6
6	Croad Langshans	12.3
18	Buff Orpingtons	10.6

The records for the six leading pens are as follows:

Pen No.	Breed.	Eggs laid during 9th Month.	Totals for 9 Months.
6	White Wyandottes	107 value 8/8	992 £5/10/0
18	do.	51 " 4/1½	935 £5/9/8
46	White Leghorns	79 " 6/4	982 £5/6/9½
38	do.	109 " 8/10	982 £5/2/7½
2	White Wyandottes	102 " 8/3	1,002 £5/2/4½
39	White Leghorns	110 " 8/9½	981 £5/1/9½

Arrangements can be made to visit the Competition by application to the College Authorities.

Issued from the Publishing Offices of the Utility Poultry Club, 68B, Lincoln's Inn Fields, London, W.C.

# SOUTH AUSTRALIAN EGG-LAYING COMPETITION AT PARAFIELD POULTRY STATION.

To the Editor of the ILLUSTRATED POULTRY RECORD.

Sir,—The following are the scores of the first six pullets up to May 31, 1914 (end of the second month):

1.	Tom Barron, England, White Leghorns.....	370
2.	R. W. Pope, Victoria, White Leghorns.....	365
3.	D. J. Robertson, S. Australia, White Leghorns.....	358
4.	Tom Barron, England, White Wyandottes .....	344
5.	W. Purvis, S. Australia, White Leghorns.....	342
6.	H. Woodhead, S. Australia, White Leghorns.....	330

Moulting has been very general among the local pens this year, thus accounting for the small scores. So far the English pens have not moulted, although that will occur probably in a few weeks. The birds generally are now making up, and good scoring will be the order of the day.

The large number of visitors to the poultry station are much interested in the English pens, and are full of praise for the enterprise exhibited by Mr. Barron in sending his birds to compete in Australia.—Yours faithfully,

D. F. LAURIE, Government Poultry Expert.

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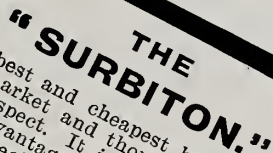
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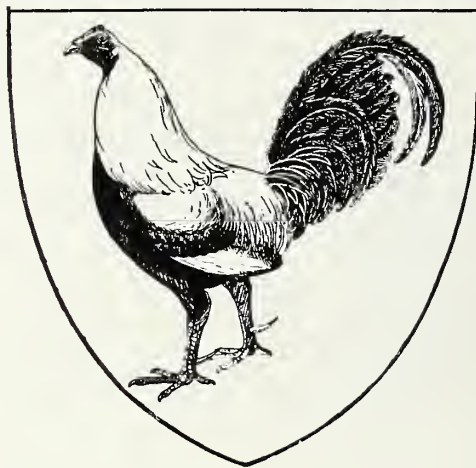
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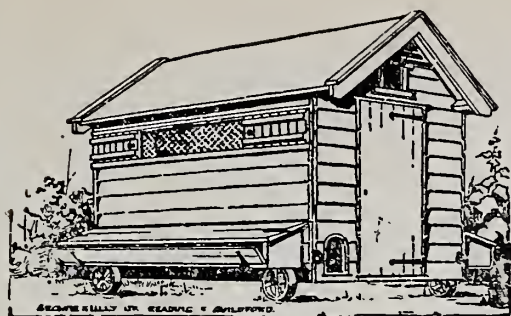
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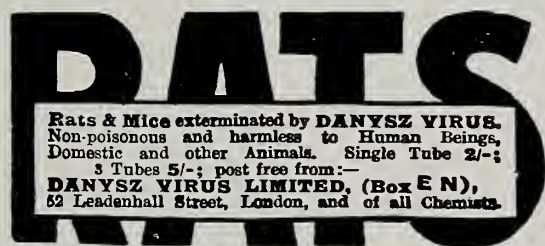
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